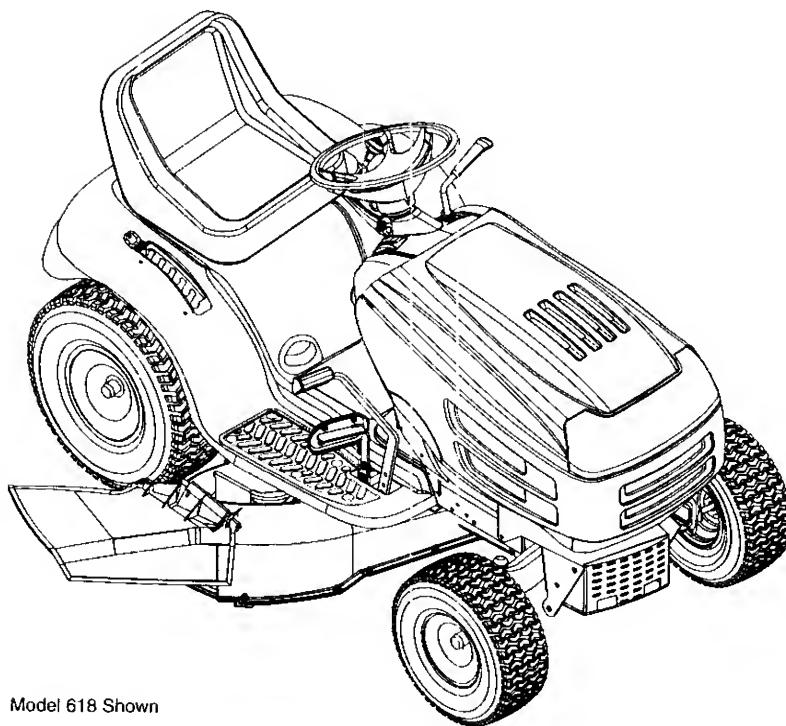


OPERATOR'S MANUAL

Hydrostatic Lawn Tractor
Models 617
618
619



Model 618 Shown

IMPORTANT: READ SAFETY RULES AND INSTRUCTIONS CAREFULLY

Warning: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized dealer or contact the service department, P.O. Box 368022 Cleveland, Ohio 44136-9722.

MTD PRODUCTS, INC P.O. BOX 368022 CLEVELAND, OHIO 44136-9722

SECTION 1: TABLE OF CONTENTS

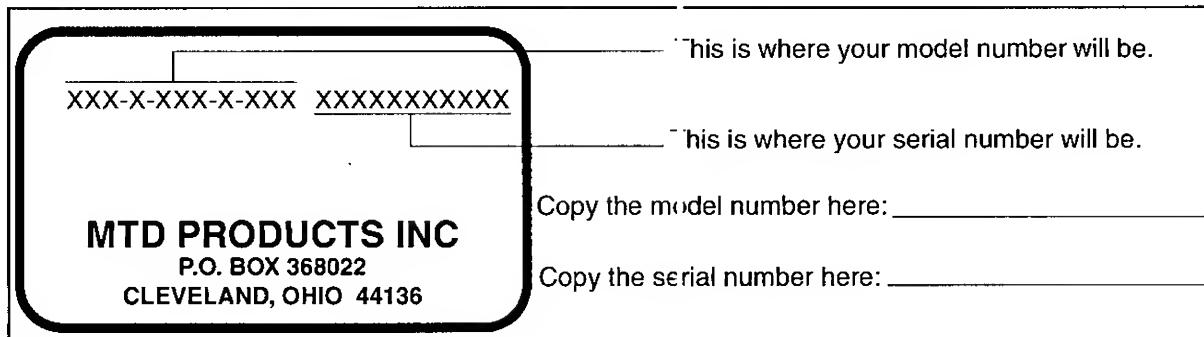
| | PAGE |
|--|------------|
| FINDING YOUR MODEL NUMBER | 2 |
| CALLING WARRANTY SERVICE | 2 |
| IMPORTANT SAFE OPERATION PRACTICES | 3 |
| SAFETY LABELS FOUND ON YOUR UNIT | 5 |
| SLOPE GAUGE | 6 |
| ATTACHMENTS & ACCESSORIES | 7 |
| TRACTOR SET-UP | 7 |
| CONTROLS | 8 |
| OPERATION | 11 |
| ADJUSTMENTS | 15 |
| MAINTENANCE | 17 |
| LUBRICATION | 23 |
| TROUBLESHOOTING GUIDE | 24 |
| PARTS LIST | 25 |
| WARRANTY INFORMATION | Back Cover |

SECTION 2: FINDING YOUR MODEL NUMBER

This Operator's Manual is an important part of your new ride. It will help you assemble, prepare and maintain your tractor. Please read and understand what it says.

Before you start to prepare your tractor for its first use, please locate the model plate and copy the information from it in this Operator's Manual. The information on the model plate is very important if you need help from your dealer or the MTD customer support department.

- Every tractor has a model plate. You can locate it by lifting the seat and looking at the seat bracket.
- An example of what the model plate will look like is shown below.



SECTION 3: CALLING CUSTOMER SUPPORT

- **LOCATE YOUR MODEL NUMBER AND SERIAL NUMBER** — Record this information in the space provided. To find your unit's specific model number and serial number, see SECTION 2: FINDING YOUR MODEL NUMBER.
- If you are having difficulty assembling this product or if you have any questions regarding the controls, operation or maintenance of this unit, please call the Customer Support Department.
- Customer Support can be reached by dialing: 1- (330) 220-4MTD
(4683)
or
1- (800) 800-7310
- Please have your model number and serial number ready when you call.
- Although both numbers are important, you will be asked to enter only your *serial* number before your call can be processed.

SECTION 4: IMPORTANT SAFE OPERATION PRACTICES



WARNING: THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH, IF NOT FOLLOWED, COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE YOUR LAWN MOWER. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY. WHEN YOU SEE THIS SYMBOL, HEED ITS WARNING.



WARNING: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



DANGER: Your lawn mower was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This lawn mower is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

1. GENERAL OPERATION

- Read, understand, and follow all instructions in the operator's manual and on the machine before starting. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
- Only allow responsible individuals familiar with the instructions to operate the machine. Know controls and how to stop the machine quickly.
- Do not put hands or feet under cutting deck or near rotating parts.
- Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade. A small object may have been overlooked and could be accidentally thrown by the mower in any direction and cause injury to you or a bystander. To help avoid a thrown objects injury, keep children, bystanders and helpers at least 75 feet from the mower while it is in operation. Always wear safety glasses or safety goggles during operation or while performing an adjustment or repair, to protect eyes from foreign objects. Stop the blade(s) when crossing gravel drives, walks or roads.
- Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
- Never carry passengers.
- Disengage blade(s) before moving the drive pedal for into position for reverse travel and backing up. Always look down and behind before and while backing.
- Be aware of the mower and attachment discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the chute guard in place.
- Slow down before turning. Operate the machine smoothly. Avoid erratic operation and excessive speed.
- Never leave a running machine unattended. Always turn off blade(s), place transmission in neutral, set park brake, stop engine and remove key before dismounting.
- Turn off blade(s) when not mowing.
- Stop engine and wait until blade(s) comes to a complete stop before (a) removing grass catcher or unclogging chute, or (b) making any repairs, adjusting or removing any grass or debris.
- Mow only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.
- Watch for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading the machine into a trailer or truck. This unit should not be driven up or down a ramp onto a trailer or truck under power, because the unit could tip over, causing serious personal injury. The unit must be pushed manually on a ramp to load or unload properly.
- Never make a cutting height adjustment while engine is running if operator must dismount to do so.
- Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Do not wear loose fitting clothes or jewelry. They can be caught in moving parts. Never operate a unit in bare feet, sandals, or sneakers.
- Check overhead clearance carefully before driving under power lines, wires, bridges or low hanging tree branches, before entering or leaving buildings, or in any other situation where the operator may be struck or pulled from the unit, which could result in serious injury.

- Disengage all attachment clutches, thoroughly depress the brake pedal, and take your foot off of the drive pedal before attempting to start engine.
- Your mower is designed to cut normal residential grass of a height no more than 10". Do not attempt to mow through unusually tall, dry grass (e.g., pasture) or piles of dry leaves. Debris may build up on the mower deck or contact the engine exhaust presenting a potential fire hazard.

2. SLOPE OPERATION

Slopes are a major factor related to loss of control and tip-over accidents which can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.

For your safety, use the slope gauge included as part of this manual to measure slopes before operating this unit on a sloped or hilly area. If the slope is greater than 15° as shown on the slope gauge, do not operate this unit on that area or serious injury could result.

DO:

- Mow up and down slopes, not across.
- Remove obstacles such as rocks, limbs, etc.
- Watch for holes, ruts or bumps. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Use slow speed. Always keep machine in gear when going down slopes to take advantage of engine braking action.
- Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability.
- Use extra care with grass catchers or other attachments. These can change the stability of the machine.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction. Rapid engagement or braking could cause the front of the machine to lift and rapidly flip over backwards which could cause serious injury.
- Avoid starting or stopping on a slope. If tires lose traction, disengage the blade(s) and proceed slowly straight down the slope.

DO NOT:

- Do not turn on slopes unless necessary; then, turn slowly and gradually downhill, if possible.
- Do not mow near drop-offs, ditches or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
- Do not mow on wet grass. Reduced traction could cause sliding.
- Do not try to stabilize the machine by putting your foot on the ground.
- Do not use grass catcher on steep slopes.

3. CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. Never assume that children will remain where you last saw them.

- Keep children out of the mowing area and in watchful care of an adult other than the operator.
- Be alert and turn machine off if children enter the area.
- Before and when backing, look behind and down for small children.
- Never carry children, even with the blades off. They may fall off and be seriously injured or interfere with the safe machine operation.
- Never allow children under 14 years old to operate the machine. Children 14 years and over should only operate machine under close parental supervision and proper instruction.
- Remove key when machine is unattended to prevent unauthorized operation.
- Use extra care when approaching blind corners, shrubs, trees or other objects that may obscure your vision of a child or other hazard.

4. SERVICE

- Use extreme care in handling gasoline and other fuels. They are extremely flammable and the vapors are explosive.
- Use only an approved container.
- Never remove fuel cap or add fuel with the engine running. Allow engine to cool at least two minutes before refueling.
- Replace fuel cap securely and wipe off any spilled fuel before starting the engine as it may cause a fire or explosion.
- Extinguish all cigarettes, cigars, pipes and other sources of ignition.
- Never refuel the machine indoors because fuel vapors will accumulate in the area.
- Never store the fuel container or machine inside where there is an open flame or spark, such as a gas hot water heater, space heater or furnace.
- Never run a machine inside a closed area.
- To reduce fire hazard, keep the machine free of grass, leaves or other debris build-up. Clean up oil or fuel spillage. Allow machine to cool at least 5 minutes before storing.
- Before cleaning, repairing or inspecting, make certain the blade and all moving parts have stopped. Disconnect the spark plug wire, and keep the wire away from the spark plug to prevent accidental starting.
- Check the blade and engine mounting bolts at frequent intervals for proper tightness. Also, visually inspect blade for damage (e.g., excessive wear, bent, cracked). Replace with blade which meets original equipment specifications.

- Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly. Use all guards as instructed in this manual.
- After striking a foreign object, stop the engine, remove the wire from the spark plug and thoroughly inspect the mower for any damage. Repair the damage before restarting and operating the mower.
- Grass catcher components are subject to wear, damage and deterioration, which could expose moving parts or allow objects to be thrown. For your safety protection, frequently check components and replace with manufacturer's recommended parts when necessary.
- Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves and use extra caution when servicing blade(s).
- Check brake operation frequently. Adjust and service as required.
- Muffler, engine and belt guards become hot during operation and can cause a burn. Allow to cool down before touching.
- Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.
- Observe proper disposal laws and regulations. Improper disposal of fluids and materials can harm the environment and the ecology.
- Prior to disposal, determine the proper method to dispose of waste from your local Environmental Protection Agency. Recycling centers are established to properly dispose of materials in an environmentally safe fashion.
- Use proper containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them. Properly dispose of the containers immediately following the draining of fluids.
- DO NOT pour oil or other fluids into the ground, down a drain or into a stream, pond, lake or other body of water. Observe Environmental Protection Agency regulations when disposing of oil, fuel, coolant, brake fluid, filters, batteries, tires and other harmful waste.

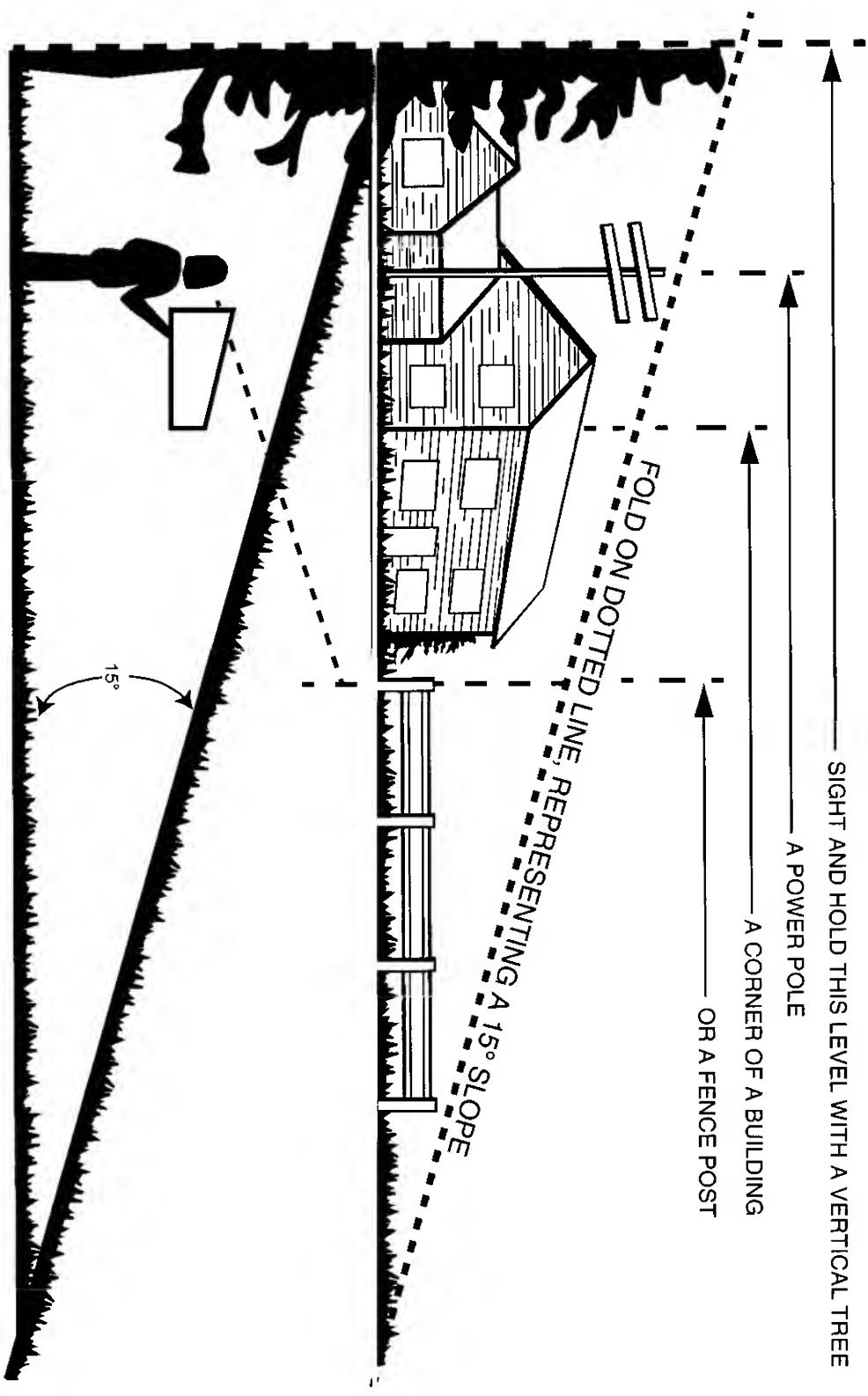


WARNING - YOUR RESPONSIBILITY: Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.



Figure 1 Safety Labels found on your unit

USE THIS PAGE AS A GUIDE TO DETERMINE SLOPES WHERE YOU MAY MOW GRAVEL.



WARNING

Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2-1/2 feet every 10 feet). A riding mower could overturn and cause serious injury. If operating a walk-behind mower on such a slope, it is extremely difficult to maintain your footing and you could slip, resulting in serious injury. Operate RIDING mowers up and down slopes, never across the face of slopes.

SECTION 5: ATTACHMENTS & ACCESSORIES

| MODEL NUMBER | DESCRIPTION |
|--------------|---|
| OEM-190-602 | FastAttach™ Twin Bagger Grass Collector (For 46-inch Decks) |
| OEM-190-118 | Mulch Kit (For 46-inch Decks) |
| OEM-190-603 | FastAttach™ Grille Guard (mounts on front of tractor) |
| OEM-190-604 | YardMate™ Storage Container (mounts on rear of tractor) |
| OEM-190-822 | FastAttach™ 46-inch Front Dozer Blade |
| OEM-190-823 | 42-inch Two-stage Snow Thrower |

SECTION 6: TRACTOR SET-UP

ATTACHING THE BATTERY CABLES

NOTE: The positive battery terminal is marked Pos. (+). The negative battery terminal is marked Neg. (-).

- The positive cable (heavy red wire) is secured to the positive battery terminal (+) with a hex bolt and hex nut at the factory. Make certain that the rubber boot covers the terminal to help protect it from corrosion.
- Remove the hex bolt and wing nut from the negative cable. Attach the negative cable (heavy black wire) to the negative battery terminal (-) with the bolt and wing nut.
- Place the hold-down strap in position over the battery to secure it in place. See Figure 2.

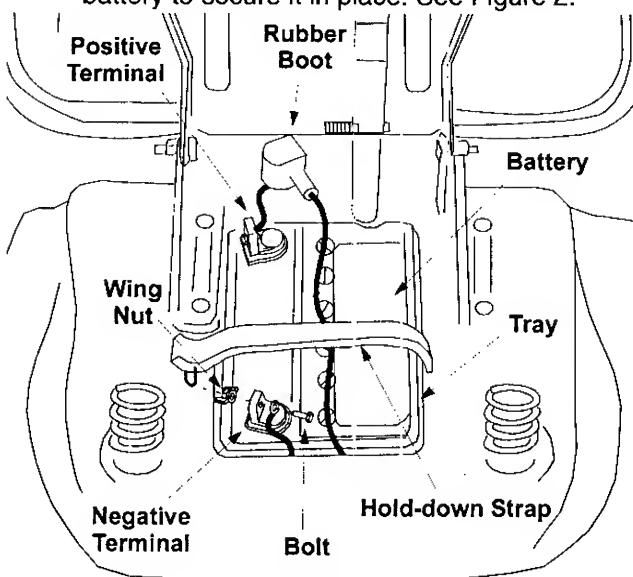


Figure 2

NOTE: If battery is put into service after date shown on top of battery, charge for minimum of one hour at 6-10 amps. Refer to the MAINTENANCE section of this manual for more detailed instructions regarding proper battery charging procedure.

GAS AND OIL FILL-UP

Service the engine with gasoline and oil as instructed in the separate engine manual packed with your tractor. Read instructions carefully.

IMPORTANT: Your tractor is shipped with oil; however, you **MUST** check the oil level before operating. Be careful not to overfill. Overfilling with oil may cause the engine to smoke. This will result in poor engine performance and could cause permanent engine damage.

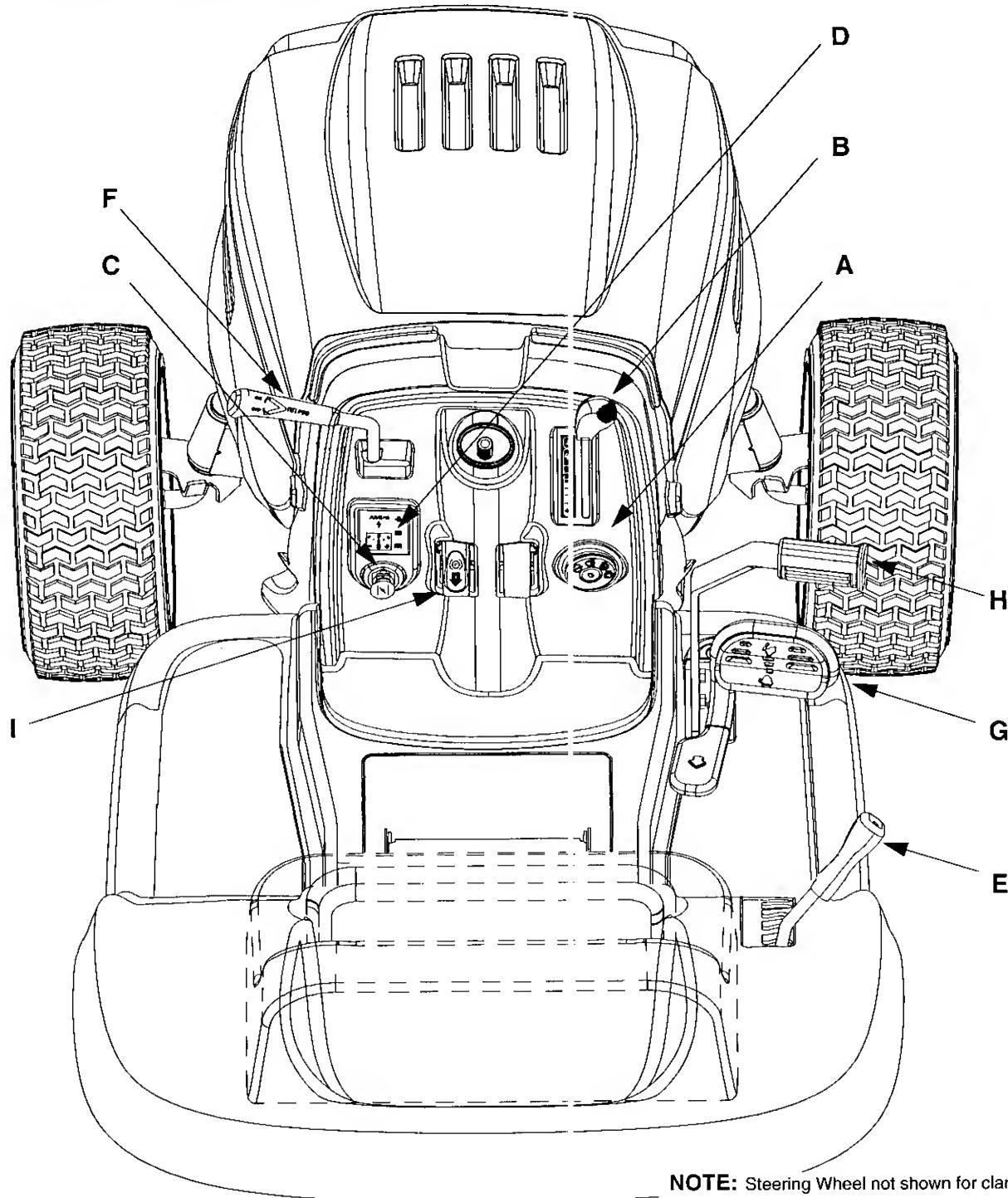
The gasoline tank is located under the hood and has a capacity of either two gallons or three gallons, depending on the model tractor. Do not overfill.

WARNING: Gasoline produces noxious fumes. Never fill fuel tank indoors. Always fill the fuel tank in a well ventilated area to avoid inhalation of gasoline fumes.

WARNING: Never smoke while fueling your tractor or fill the fuel tank while engine is running or while engine is hot.

WARNING: Do not fill closer than 1/2 inch from the top of the fuel tank to prevent spills and to allow for fuel expansion. If gasoline is accidentally spilled, move tractor away from area of spill. Avoid creating any source of ignition until gasoline vapors have disappeared.

SECTION 7: CONTROLS



NOTE: Steering Wheel not shown for clarity.

Figure 3

| | |
|----------------------------------|------------------------------|
| A Ignition Switch | F PTO (Power Take-Off) Lever |
| B Throttle Control Lever | G Drive Pedal |
| C Choke Control (if so equipped) | H Brake Pedal |
| D Indicator Monitor | I Parking Brake Button |
| E Lift Lever | |

NOTE: Any reference in this manual to the **RIGHT** or **LEFT** side of the tractor is observed from operator's position.

IGNITION SWITCH

To start the engine, insert key into the ignition switch and turn clockwise to the **START** position. Release key to the **ON** position once engine has fired. See Figure 4. Refer to **STARTING THE ENGINE** in the **OPERATION** section of this manual for detailed starting instructions. The ignition switch is also used to operate the headlights. Refer to **OPERATING THE HEADLIGHTS** in the **OPERATION** section of this manual for detailed instructions



WARNING: Remove the key from the tractor when the tractor is not in use to prevent accidental starting.

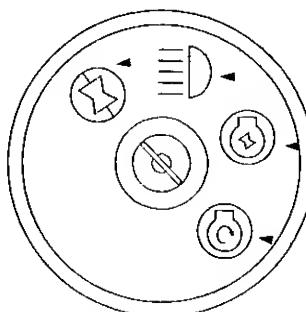


Figure 4

THROTTLE CONTROL LEVER

The throttle lever is located on the right side of the tractor's dash panel. This lever controls the speed of the engine, and on some units the choke control also. When set in a given position, the throttle will maintain a uniform engine speed. See Figure 5.

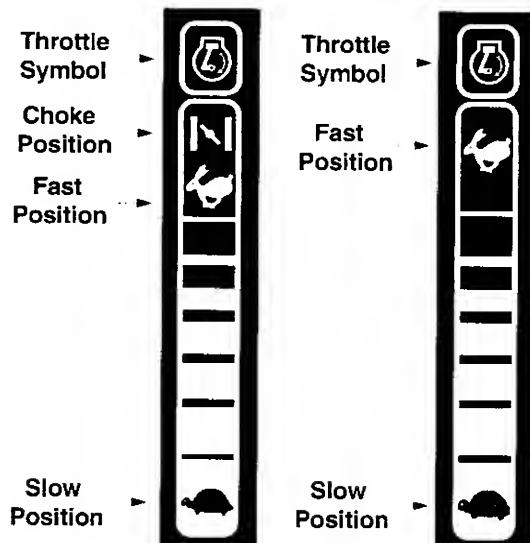
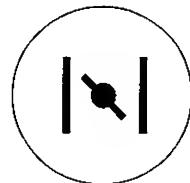


Figure 5

IMPORTANT: When using PTO operated equipment such as the cutting deck or other attachments, **ALWAYS** operate the tractor with the throttle lever in the **FAST** (rabbit) position.

CHOKE CONTROL

On some units, moving the throttle lever all the way forward activates the engine's choke control. On all other units, the choke control can be found on the left side of the dash panel and is activated by pulling the knob outward. Activating the choke control closes the choke plate on the carburetor and aids in starting the engine. Refer to **STARTING THE ENGINE** in the **OPERATION** section of this manual for detailed starting instructions.



SYSTEMS INDICATOR MONITOR

Your tractor is equipped with an ammeter as part of its systems indicator monitor and is located on the left side of your tractor's dash panel. See Figure 6.

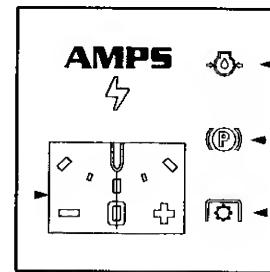


Figure 6

If the Brake light or PTO light illuminates when attempting to start the unit, proceed as follows:

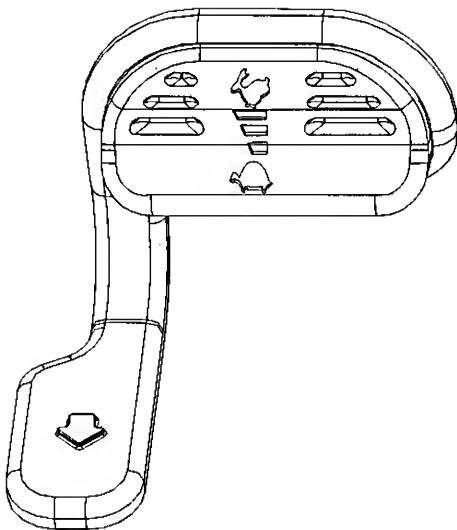
BRAKE — Depress the brake pedal.
PTO — Move PTO lever into the disengaged (OFF) position.

It is normal for the Oil light to illuminate while the engine is cranking, but if it illuminates **while the engine is running**, proceed as follows:

OIL — Stop the tractor immediately and check the crankcase oil level as instructed in the separate engine manual packed with your unit. Add oil as required.

The ammeter measures the electrical output of the engine's charging system. Under normal operating conditions, with the engine running at full throttle, the ammeter's needle should measure a positive charge.

DRIVE PEDAL



The drive pedal is located below the brake pedal on the right front side of the tractor along the running board. Depress the upper portion of the drive pedal forward to cause the tractor to travel forward. Depress the lower portion of the drive pedal with the ball of your right foot (NOT your heel) to cause the tractor to travel in reverse. Ground speed is also controlled with the drive pedal. The further forward or rearward that the pedal is pivoted, the faster the tractor will travel. The pedal will return to its original position when it's not depressed.

IMPORTANT: Always set the parking brake when leaving the tractor unattended.

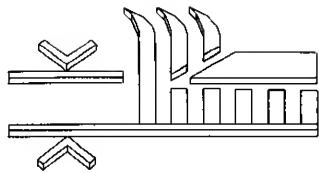
BRAKE PEDAL



The brake pedal is located on the right front side of the tractor above the drive pedal along the running board. The brake pedal can be used for sudden stops or setting the parking brake.

NOTE: The brake pedal must be fully depressed to activate the safety interlock switch when starting the tractor.

LIFT LEVER



The lift lever is used to change the operating position (height) of the cutting deck. To operate, move the lever to the left, then place in the notch best suited for your application.

PARKING BRAKE BUTTON

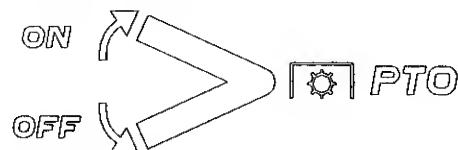
To set the parking brake, fully depress the brake pedal and push the parking brake button in. Hold the button in while taking your foot off the brake pedal. Both the parking button and the brake pedal will then stay depressed. To release the parking brake, depress the brake pedal slightly. The parking brake button will then return to its original position.



NOTE: The parking brake must be set if the operator leaves the seat with the engine running or the engine will automatically shut off.

IMPORTANT: Always set the parking brake when leaving the tractor unattended.

PTO (POWER TAKE-OFF) LEVER



The PTO lever, if so equipped, is located on the left side of the dashboard next to the steering wheel. Move the PTO lever forward to engage the power to the cutting deck or other attachments; move the PTO lever backward (toward the rear of the tractor) to disengage the power to the attachments.

NOTE: The PTO lever must be in the disengaged (OFF) position when starting the engine, when traveling in reverse and if the operator leaves the seat.

SECTION 8: OPERATION

SAFETY INTERLOCK SWITCHES

This tractor is equipped with a safety interlock system for the protection of the operator. If the interlock system should ever malfunction, do not operate the tractor. Contact an authorized *MTD* service dealer in your area. The safety interlock system prevents the engine from cranking or starting unless the brake pedal is fully depressed, and the PTO lever is in the disengaged (OFF) position.

- The safety interlock system will automatically shut off the engine if the operator leaves the seat before engaging the brake lock.
- The safety interlock system will automatically shut off the engine if the operator leaves the seat with the PTO lever in the engaged (ON) position, regardless of whether the brake lock is engaged. The PTO lever must be in the disengaged (OFF) position to restart the engine.
- The safety interlock system will automatically shut off the tractor's engine if the PTO lever is moved into the engaged (ON) position with the drive pedal in position for reverse travel.



WARNING: Do NOT attempt to bypass or disconnect the tractor's safety interlock. Doing so could result in serious personal injury or death.

IMPORTANT: Tampering with or attempting to bypass the tractor's Safety Interlock Switches in any way WILL void your warranty.



WARNING

AVOID SERIOUS INJURY OR DEATH

- GO UP AND DOWN SLOPES, NOT ACROSS.
- AVOID SUDDEN TURNS.
- DO NOT OPERATE THE UNIT WHERE IT COULD SLIP OR TIP.
- IF MACHINE STOPS GOING UPHILL, STOP BLADE(S) AND BACK DOWNHILL SLOWLY.
- DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND.
- NEVER CARRY CHILDREN.
- LOOK DOWN AND BEHIND BEFORE AND WHILE BACKING.
- KEEP SAFETY DEVICES (GUARDS, SHIELDS, AND SWITCHES) IN PLACE AND WORKING.
- REMOVE OBJECTS THAT COULD BE THROWN BY THE BLADE(S).
- KNOW LOCATION AND FUNCTION OF ALL CONTROLS.
- BE SURE BLADE(S) AND ENGINE ARE STOPPED BEFORE PLACING HANDS OR FEET NEAR BLADE(S).
- BEFORE LEAVING OPERATOR'S POSITION, DISENGAGE BLADE(S), ENGAGE PARKING BRAKE, SHUT ENGINE OFF AND REMOVE KEY.

READ OPERATOR'S MANUAL

SETTING THE CUTTING HEIGHT

Select the height position of the cutting deck by placing the deck lift lever in any of the six different cutting height notches on the right side of the fender. Then adjust the deck wheels so that they are at least 1/4 inch to 1/2 inch above the ground when the tractor is on a smooth, flat surface such as a driveway.



WARNING: Keep hands and feet away from the discharge chute opening of the cutting deck.

NOTE: *The deck wheels are an anti-scalp feature of the deck and are not designed to support the weight of the cutting deck.*

Refer to the ADJUSTMENTS section of this manual for more detailed instructions regarding various deck adjustments.

STARTING THE ENGINE

NOTE: *Refer to the TRACTOR SET-UP section of this manual for Gasoline and Oil fill-up instructions.*

- Insert the tractor key into the ignition switch.
- Place the PTO lever in the disengaged (OFF) position.
- Depress the brake pedal and set the parking brake.
- Move the throttle control lever into the FAST (or CHOKE, if so equipped) position.
- Pull out the choke control knob, if so equipped (a warm engine may not require choking).
- Turn the ignition key clockwise to the START position. After the engine starts, release the key. It will return to the ON position.

IMPORTANT: *Do NOT hold the key in the START position for longer than ten seconds at a time. Doing so may cause damage to your engine's starter.*

After the engine starts, slowly release the brake pedal. As the engine warms up, gradually push the choke control knob inward (or move the throttle control lever out of the CHOKE position into the FAST position) to open up the choke plate on the engine's carburetor.

NOTE: *Do NOT leave the choke control out while operating the tractor. Doing so will result in a "rich" fuel mixture and cause the engine to run poorly.*

STOPPING THE ENGINE

- Place the PTO lever in the disengaged (OFF) position
- Move the throttle control into the SLOW (turtle) position and allow the engine to "idle down" for ten seconds. Failure to do so may result in an engine afterfire.
- Turn the ignition key counterclockwise to the OFF position.
- Remove the key from the ignition switch to prevent accidental starting.

IMPORTANT: If you think you've struck a foreign object, stop the engine immediately. Remove the wire(s) from the spark plug(s), thoroughly inspect the unit for any damage, and repair the damage before restarting and operating the tractor.

DRIVING THE TRACTOR



WARNING: Do not leave the seat of the tractor without first placing the PTO lever in the disengaged (OFF) position, depressing the brake pedal and engaging the parking brake. If leaving the tractor unattended, also turn the ignition key off and remove the key.

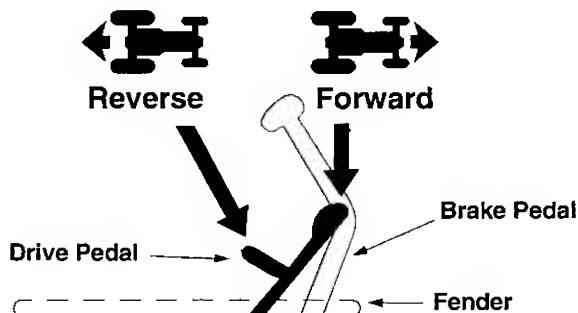


Figure 7

- Briefly depress the brake pedal to release the parking brake. Move the throttle lever into the FAST (rabbit) position.
- To travel FORWARD, slowly depress the upper portion of the drive pedal forward until the desired speed is achieved. See Figure 7.
- To travel in REVERSE, check that the area behind is clear then slowly depress the lower portion of the drive pedal with the ball of your foot (NOT your heel) until the desired speed is achieved. See Figure 7.

IMPORTANT: Do NOT attempt to change the direction of travel when the tractor is in motion. Always bring the tractor to a complete stop before pivoting the drive pedal from forward position to reverse position or vice versa.

DRIVING ON SLOPES

Refer to the SLOPE GAUGE on page 6 to help determine slopes where you may not operate safely.



WARNING: Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2-1/2 feet every 10 feet). The tractor could overturn and cause serious injury.

Operate the tractor up and down slopes, never across slopes. Do not drive so that the tractor may tip over sideways.

Before operating the tractor on any slope, walk the slope to look for possible hazards such as rocks, mounds, ruts, stumps or other surface irregularities which could cause the tractor to be upset.

Avoid turns when driving on a slope. If a turn must be made, turn down the slope. Turning up a slope greatly increases the chance of a roll over.

Avoid stopping when driving up a slope. If it is necessary to stop while driving up a slope, start up smoothly and carefully to reduce the possibility of flipping the tractor over backward.

OPERATING THE HEADLIGHTS

To turn the tractor's headlights on:

- Start the engine following the instructions earlier in this section.
- Turn the key one notch counterclockwise into the On/Lights position of the ignition switch. Refer to Figure 4.

To turn the tractor's headlights off:

- Turn the key either into the On position (to leave the engine running) or the Off position (to shut the engine off). Refer to Figure 4.

IMPORTANT: Never move the key into the Start position while the engine is running. Doing so may cause damage to your engine's starter.

STOPPING THE ENGINE

- Place the PTO lever in the disengaged (OFF) position.
- Move the throttle control into the SLOW position and allow the engine to "idle down" for ten seconds, then turn the ignition key counterclockwise to the OFF position.
- Remove the key from the ignition switch to prevent accidental starting.

IMPORTANT: If you think you've struck a foreign object, stop the engine immediately. Remove the wire(s) from the spark plug(s), thoroughly inspect the unit for any damage, and repair the damage before restarting and operating the mower.

USING THE LIFT LEVER

To raise the cutting deck, move the lift lever to the left, then place it in the notch best suited for your application. Refer to **SETTING THE CUTTING HEIGHT** earlier in this section.

ENGAGING THE PTO (POWER TAKE-OFF) LEVER

- Move the throttle control lever to the FAST (rabbit) position.
- Move the PTO lever forward into the engaged (ON) position.
- Keep the throttle lever in the FAST (rabbit) position for the most efficient use of the cutting deck and other attachments.
- The operator must remain in the tractor seat at all times. If the operator should leave the seat without moving the PTO lever into the disengaged (OFF) position and setting the parking brake, the engine will shut off.

IMPORTANT: *The PTO lever cannot be in the engaged (ON) position when the tractor is driving in the reverse direction. The safety interlock system will automatically shut off the engine if the PTO lever is moved into the engaged (ON) position with the drive pedal in position for reverse travel. Refer to SAFETY INTERLOCK SWITCHES earlier in this section.*

MOWING

This tractor is equipped with one of MTD's high quality cutting decks. The following information will be helpful when using the cutting deck with your tractor.



WARNING: To avoid possible injury, do not allow anyone in the area of the tractor while mowing. Small objects may be picked up and discharged by the mower.



WARNING: Never direct the discharge of material toward bystanders or allow anyone near the machine while in operation.

- For best results it is recommended that the first two laps be cut with the discharge thrown towards the center. After the first two laps, reverse the direction to throw the discharge to the outside for the balance of cutting. This will give a better appearance to the lawn.
- Do not cut the grass too short. Short grass invites weed growth and yellows quickly in dry weather.
- Mowing should always be done with the engine at full throttle.

- Do not mow at high ground speed, especially if a mulch kit or grass collector is installed.
- Under heavier conditions it may be necessary to go back over the cut area a second time to get a clean cut.
- Do NOT attempt to mow heavy brush and weeds and extremely tall grass. Your tractor is designed to mow lawns, NOT clear brush.
- Keep the blades sharp and replace the blades when worn. Refer to the **MAINTENANCE** section of this manual for proper blade sharpening instructions.

MOVING THE TRACTOR MANUALLY

Your tractor's transmission is equipped with a hydrostatic relief valve for occasions when it is necessary to move the tractor manually. Activating this valve forces the fluid in the transmission to bypass its normal route, allowing the rear tires to "freewheel." To engage the hydrostatic relief valve, proceed as follows:

- Locate the hydrostatic bypass rod in the rear of the tractor. See Figure 8.

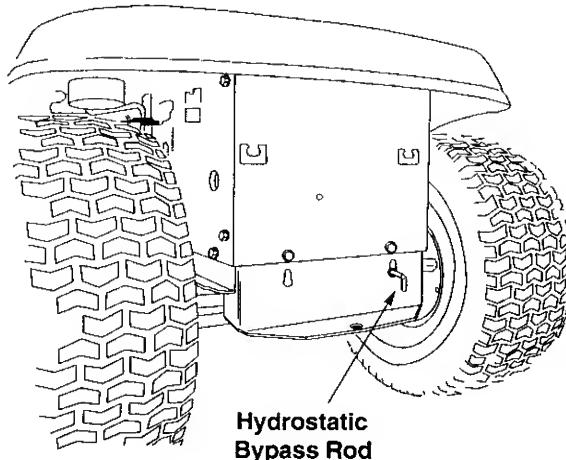


Figure 8

- Pull the hydrostatic bypass rod outward, then down, to lock it in place.

NOTE: *The transmission will NOT engage when the hydrostatic bypass rod is pulled out. Return the rod to its normal position prior to operating the tractor.*

IMPORTANT: *Never attempt to move the tractor manually without first engaging the hydrostatic relief valve. Doing so will result in serious damage to the tractor's transmission.*

SECTION 9: ADJUSTMENTS

SEAT ADJUSTMENT

To adjust the position of the seat, loosen, but do NOT remove the four screws which secure the seat to the seat pivot bracket. Slide the seat forward or backward until desired position is reached. Retighten the four screws. See Figure 9.

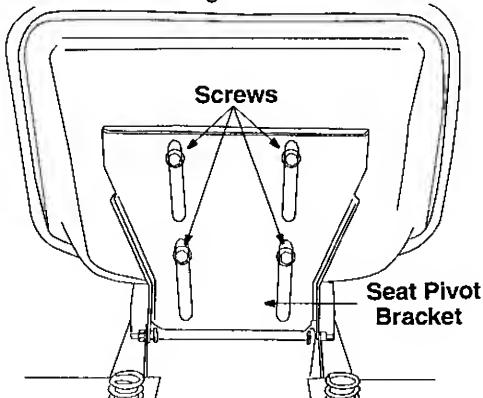
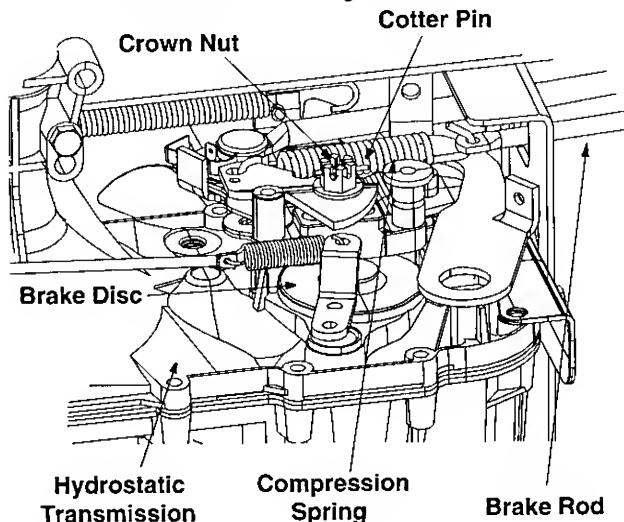


Figure 9

BRAKE ADJUSTMENT

If the tractor does not come to a complete stop when the brake pedal is completely depressed, or if the tractor's rear wheels can roll with the parking brake applied, the brake is in need of adjustment. The brake disc can be found on the right side of the transmission in the rear of the tractor. Adjust if necessary as follows:

- Looking at the transmission from the right side of the tractor, locate the compression spring and brake disc. See Figure 10.



NOTE: View shown from beneath tractor.

Figure 10

- Carefully remove the cotter pin from the crown nut on the right side of the brake assembly.
- Using a feeler gauge, check the gap between the brake disc and the brake puck. Proper gap is .011".
- Tighten the crown nut until the proper gap is achieved.
- Reinsert the cotter pin, if undamaged (otherwise replace), into the crown nut to keep it from rotating out of adjustment.

CARBURETOR ADJUSTMENT

WARNING: If any adjustments are made to the engine while the engine is running (e.g. carburetor), disengage all clutches and blades. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

NOTE: A dirty air cleaner will cause an engine to run rough. Be certain it is clean and properly attached before adjusting carburetor.

Refer to separate engine manual packed with your unit for carburetor adjustment information or see an authorized engine dealer.

STEERING ADJUSTMENT

If the tractor turns tighter in one direction than the other, or if the ball joints are being replaced due to damage or wear, the steering drag links may need to be adjusted.

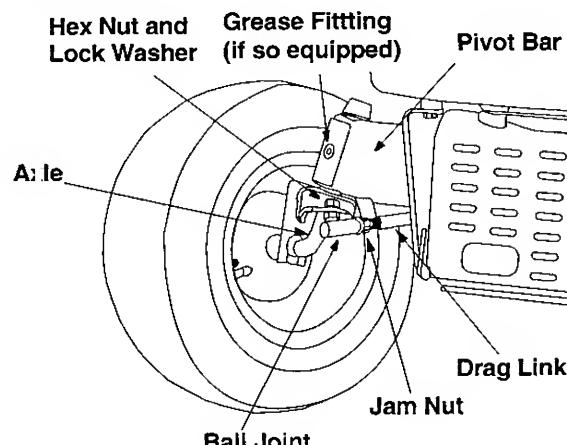


Figure 11

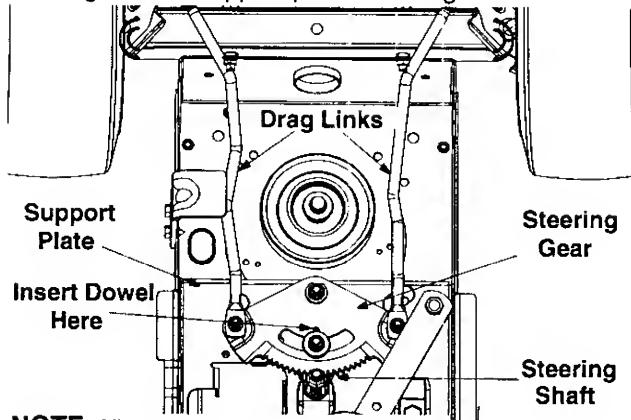
Adjust the drag links so that equal lengths are threaded into the ball joint on the left side and the ball joint on the right side:

- Loosen the jam nut found on the drag link at the rear of the ball joint. See Figure 11.
- Remove the hex nut and lock washer on the top of ball joint. See Figure 11.
- Thread the ball joint toward the jam nut to shorten the drag link. Thread the ball joint away from the jam nut to lengthen the drag link.
- Replace hex nut and lock washer and retighten the jam nut after proper adjustment is achieved.

NOTE: *Threading the ball joints too far onto the drag links will cause the front tires to "toe-in" too far. Proper toe-in is between 1/16" and 5/16".*

Front tire toe-in can be measured as follows:

- Place the steering wheel in position for straight ahead travel. Insert a 1/4" dowel up through aligning holes in both the steering gear and support plate. See Figure 12.



NOTE: View shown from beneath tractor.

Figure 12

- In front of the axle, measure the distance horizontally from the inside of the left rim to the inside of the right rim. Note the distance.
- Behind the axle, measure the distance horizontally from the inside of the left rim to the inside of the right rim. Note the distance.
- The measurement taken in front of the axle should be between 1/16" and 5/16" less than the measurement taken behind the axle.
- Adjust if necessary.
- Remove the dowel inserted earlier before attempting to operate the tractor.

LEVELING THE DECK



WARNING: Cutting blades are sharp. Always protect hands by wearing heavy leather work gloves to grasp blades.

NOTE: Check the tractor's tire pressure before performing any deck leveling adjustments. Refer to TIRES in the maintenance section of this manual for further information regarding tire pressure.

Front to Rear

The front of the cutting deck is supported by a stabilizer bar that can be adjusted to level the deck from front to rear. The front of the deck should be 1/4" to 3/8" lower than the rear of the deck.



WARNING: Turn the tractor's engine off, remove the key from the ignition switch and apply the tractor's parking brake before making any adjustments to the deck.

- With the tractor parked on a firm, level surface, place the lift lever in the top notch (highest position) and rotate the blade nearest the discharge chute so that it is parallel with the tractor.
- Measure the distance from the front of the blade tip to the ground and the rear of the blade tip to the ground. The first measurement taken should be between 1/4" and 3/8" less than the second measurement.
- Determine the approximate distance necessary for proper adjustment and proceed, if necessary, to the next step.
- Loosen the two jam nuts on the rear side of the deck stabilizer bracket. See Figure 13.

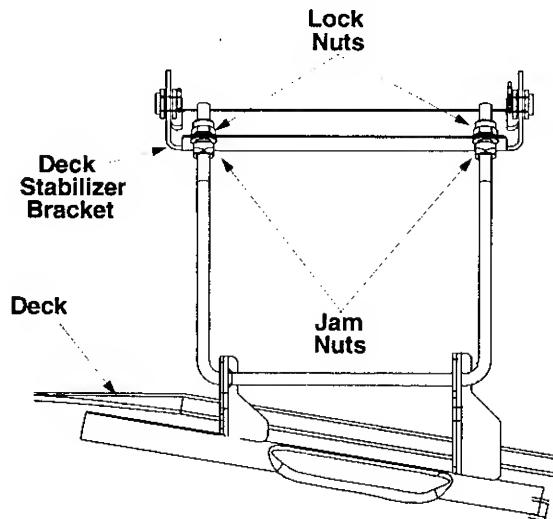


Figure 13

- Locate the two lock nuts on the opposite side of the stabilizer bracket. See Figure 13. Tighten the lock nuts to raise the front of the deck; loosen the lock nuts to lower the front of the deck.
- Retighten the two jam nuts loosened earlier when proper adjustment is achieved.

Side to Side

If the cutting deck appears to be mowing unevenly, a side to side adjustment can be performed. Adjust if necessary as follows:



WARNING: Turn the tractor's engine off, remove the key from the ignition switch and apply the tractor's parking brake before making any adjustments.

- With the tractor parked on a firm, level surface, place the lift lever in the top notch (highest position) and rotate the both blades so that they are perpendicular with the tractor.
- Measure the distance from the outside of the left blade tip to the ground and the distance from the outside of the right blade tip to the ground. Both measurements taken should be equal. If they're not, proceed to the next step.
- Loosen, but do NOT remove, the hex cap screw on the left deck hanger bracket. See Figure 14

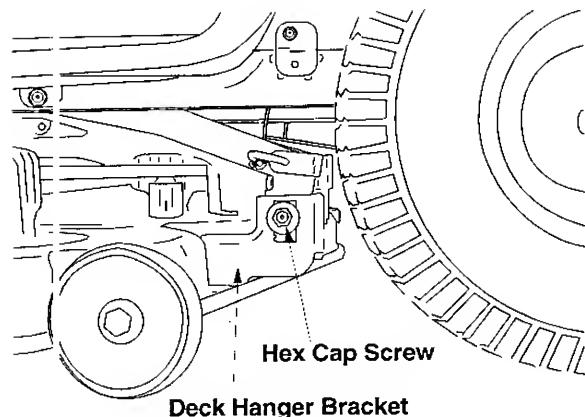


Figure 14

- Balance the deck so that both blade tip measurements taken earlier are equal.
- Retighten the hex cap screw on the left deck hanger bracket when proper adjustment is achieved.

SECTION 10: MAINTENANCE



WARNING: Disconnect the spark plug wire(s) and ground against the engine before performing any adjustments, repairs or maintenance.

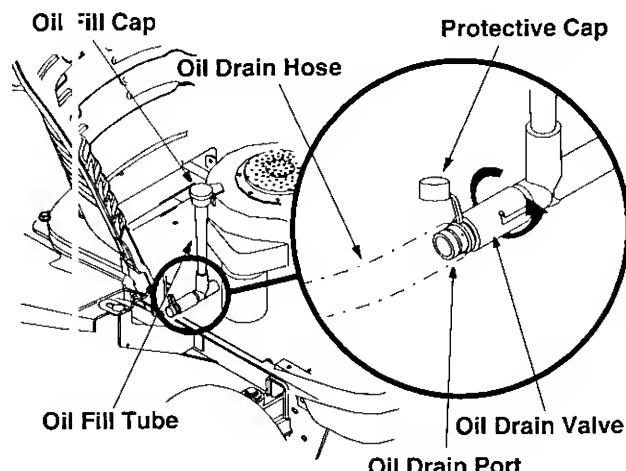
ENGINE

Refer to the separate engine manual for engine maintenance instructions.

Check engine oil level before each use as instructed in the separate engine manual packed with your unit. **Read and follow instructions carefully.**

Changing Engine Oil

- Unscrew oil fill cap and remove dipstick from the oil fill tube. See Figure 15.
- Pop open the protective cap on the end of the oil drain valve to expose the oil drain port. See Figure 15.
- Push oil drain hose (packed with unit) onto the oil drain port. Route the opposite end of the hose into an appropriate oil collection container with a capacity great enough to collect the used oil.
- Push the oil drain valve in slightly, then rotate counterclockwise and pull outward to begin draining oil. See Figure 15.



NOTE: Single-cylinder engine shown.
Valve location will vary with engine style.

Figure 15

- Service the oil filter (if so equipped) as instructed in the separate engine manual packed with your unit.

Perform the above steps in the opposite order after oil has finished draining.

- Refill the engine with new motor oil.

IMPORTANT: Refill the engine with the proper capacity and weight of motor oil as instructed in the separate engine manual.

Service air cleaner every 25 hours under normal conditions. Clean every few hours under extremely dusty condition. To service the air cleaner, refer to the separate engine manual packed with your unit.

The spark plug(s) should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each mowing season; check engine manual for correct plug type and gap specifications.

CUTTING DECK REMOVAL



WARNING: Before performing any maintenance, move the PTO lever into the disengaged (OFF) position, engage the parking brake, turn the ignition key to the OFF position and remove the key from the switch to avoid accidental starting.

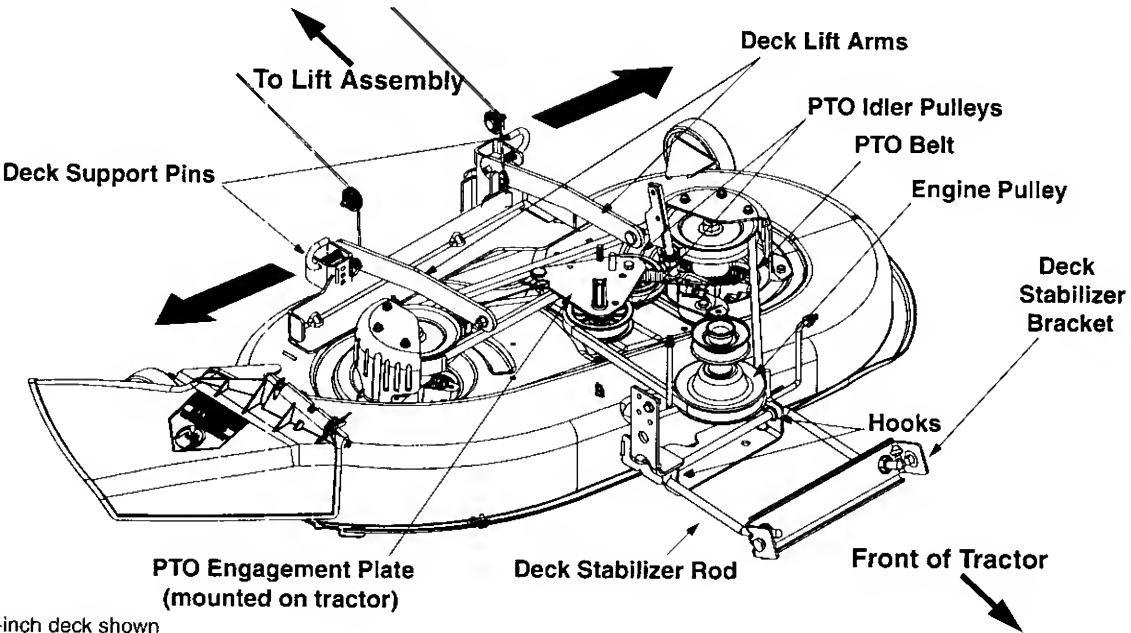
Several attachments are available for your tractor.

To mount some of these attachments and in order to perform certain maintenance procedures, the deck must be removed from the tractor. To properly remove the cutting deck, proceed as follows:



WARNING: Do NOT remove deck immediately after operating the tractor. Allow the engine and other moving parts ample time to cool down.

- Engage the tractor's parking brake.
- Move the PTO lever into the disengaged (OFF) position to relieve tension on the belt.
- Lower the deck by moving the lift lever into the bottom notch on the right fender.
- Remove the PTO belt from around the lower portion of the engine pulley and from around both PTO idler pulleys on the PTO engagement plate.



NOTE: 42-inch deck shown

Figure 16

NOTE: On units equipped with a 46-inch deck, the bottommost belt on the deck does NOT need to be removed in order to remove the deck.

- Looking at the cutting deck from the right side of the tractor, locate the deck support pin on the rear right side of the deck.
- Pull the deck support pin outward to release the deck from the deck lift arm. See Figure 16.
- Rotate the pin slightly toward the rear of the tractor and release the pin into the hole provided.
- Repeat the above steps on the left side of the tractor.
- Move the lift lever into the top notch on the right fender to raise the deck lift arms out of the way.
- Carefully move the cutting deck toward the front of the tractor allowing the hooks on the deck to release themselves from the deck stabilizer rod. Do NOT let the deck fall to the ground.
- Gently slide the cutting deck (from the right side) out from underneath the tractor.

NOTE: To properly remount the cutting deck, perform the above steps in reverse order. Having a second person assist you will ease this procedure.

CHANGING THE DECK BELT(S)

All belts on your tractor are subject to wear and should be replaced if any signs of cracking, shredding or rotting are present.

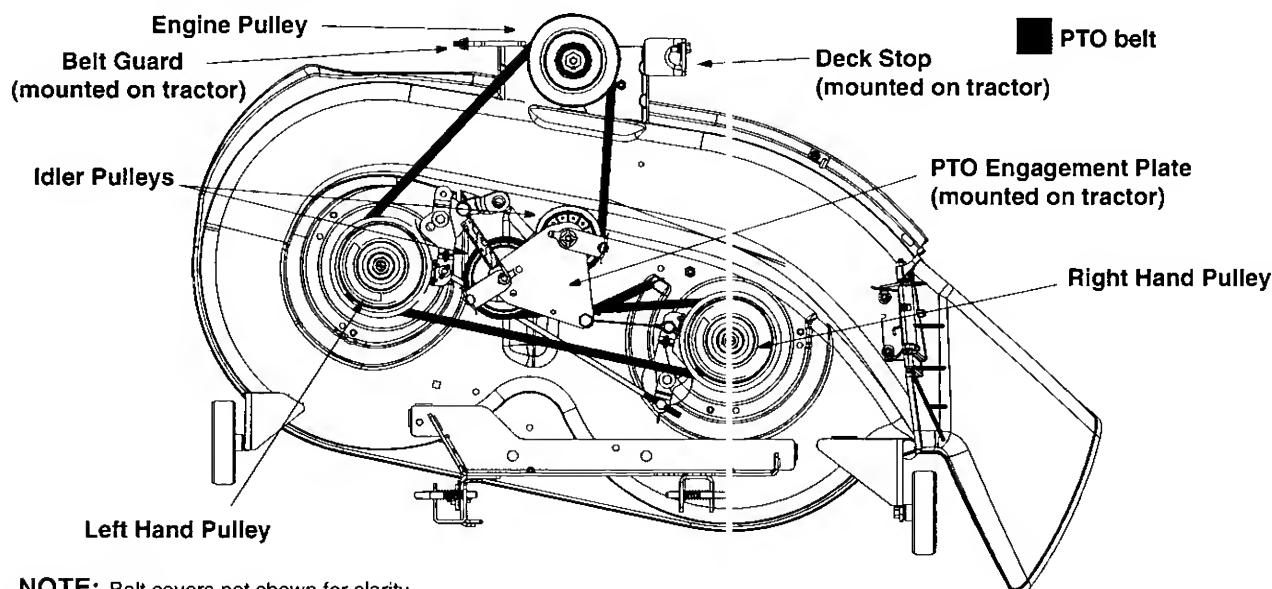
IMPORTANT: *The V-belts found on your tractor are specially designed to engage and disengage safely. A substitute (non-OEM) V-belt can be dangerous by not disengaging completely. For a proper working machine, use factory approved belts.*

To change or replace the deck belt(s) on your tractor, proceed as follows:

NOTE: *Removing the deck from the tractor as instructed earlier in this section will ease the following steps, but is not necessary.*

42-inch decks

- Lower the deck by moving the lift lever into the bottom notch on the right fender.
- Remove the belt guards by removing the self-tapping screws that fasten them to the deck surface.
- Move the PTO lever into the disengaged (OFF) position to relieve tension on the belt.
- Remove the PTO belt from around the bottom portion of the engine pulley and from around the two idler pulleys found on the PTO engagement plate. See Figure 17.
- Route the new belt as shown in Figure 17, around the deck pulleys, idler pulleys and engine pulley. OEM belt part numbers are listed in the table on the following page
- Remount the belt guards removed earlier.



NOTE: Belt covers not shown for clarity.

Figure 17

46-inch decks

- Lower the deck by moving the lift lever into the bottom notch on the right fender.
- Remove the belt guards by removing the self-tapping screws that fasten them to the deck surface.
- Move the PTO lever into the disengaged (OFF) position to relieve tension on the belt.
- Remove the PTO belt from around the bottom portion of the engine pulley and from around the two PTO idler pulleys found on the PTO engagement plate. See Figure 18.
- Route the new belt as shown in Figure 18, around the upper portion of the left hand deck pulley, PTO idler pulleys and the lower portion of the engine pulley. OEM belt part numbers are listed in the table on the following page.
- Remount the belt guards removed earlier.

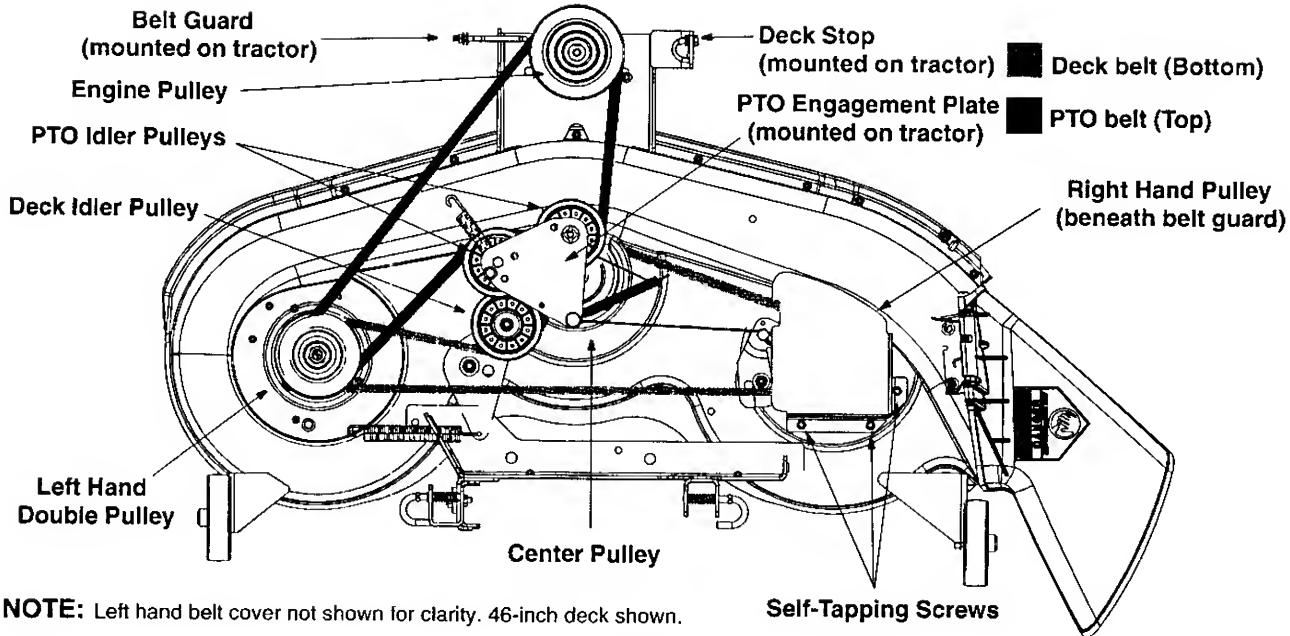


Figure 18

| | 42-Inch Deck | 46-Inch Deck |
|--------------------|--------------|--------------|
| PTO (Top) Belt | 754-0485 | 754-0486 |
| Deck (Bottom) Belt | N/A | 754-0349 |

CHANGING THE TRANSMISSION DRIVE BELT(S)

All belts on your tractor are subject to wear and should be replaced if any signs of cracking, shredding or rotting are present.

IMPORTANT: *The V-belts found on your tractor are specially designed to engage and disengage safely. A substitute (non-OEM) V-belt can be dangerous by not disengaging completely. For a proper working machine, use factory approved belts.*

To change or replace the drive belt on your tractor, proceed as follows:

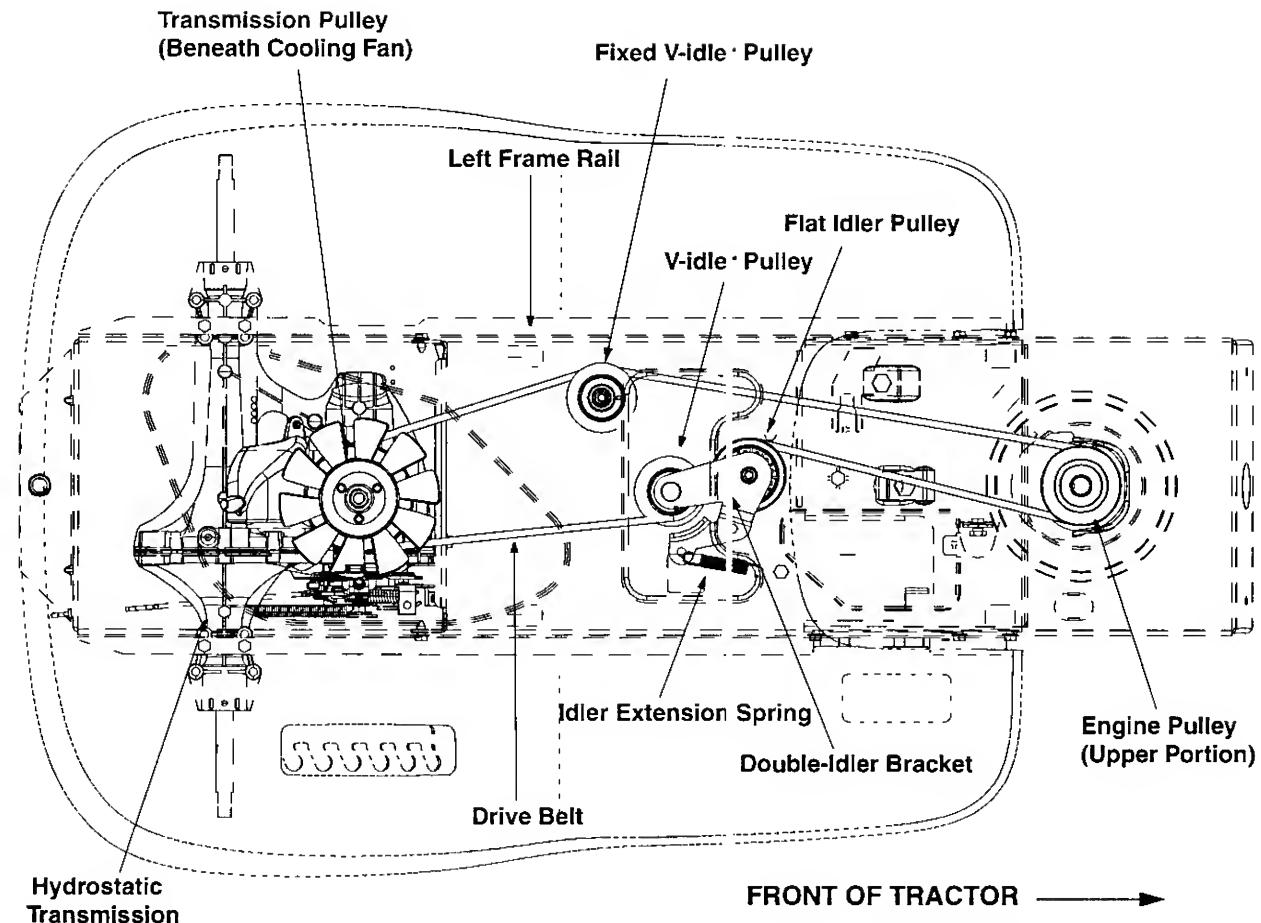
- Remove the cutting deck as instructed earlier in this section.
- After disconnecting the battery cables, remove the battery and battery tray from beneath the seat.

IMPORTANT: *When removing the battery, disconnect the NEGATIVE (Black) wire from its terminal first, followed by the POSITIVE (Red) wire. Re-install in reverse order.*

NOTE: *Proper removal of the drive belt requires the removal of several tractor components. Read through the following procedure prior to attempting it to determine if you feel you could successfully complete it. If you don't, see an authorized MTD service dealer to have the belt changed.*

IMPORTANT: *Note the routing of the lower drive belt around all the pulleys and the belt keepers (if present) BEFORE performing the following steps.*

- Locate the fixed v-idler pulley found on the left underside of the frame. See Figure 19.
- Grasp the belt on both sides of the pulley and gently move it toward the left frame rail allowing it to unseat itself from the fixed v-idler. See Figure 19.
- Pivot the double-idler bracket forward slightly before removing the idler extension spring from the stud and the double-idler bracket itself. Do NOT discard the spring.
- Roll the drive belt out from around both the v-idler pulley and the flat idler pulley found on the double-idler bracket.



NOTE: View shown from above tractor.

Figure 19

- Remove the hex bolt from the center of the engine pulley.
- Gently lower the pulley down the engine crankshaft. Once accessible, carefully remove the upper drive belt from around the pulley.

NOTE: Be careful not to lose any washers or spacers which may be found on top of the engine pulley.

- Set the engine pulley and applicable hardware aside before proceeding on to the next step.

IMPORTANT: When remounting the engine pulley, torque the center hex bolt to between 38 foot-pounds and 50 foot-pounds.

- Remove the drive belt by feeding it from front to rear, toward the hydrostatic transmission. See Figure 19.
- Continue removing the drive belt by gently lifting it off of the transmission pulley and over the cooling fan.

IMPORTANT: The fins on the cooling fan are only slightly flexible. Be careful not to damage the fan when removing the drive belt from around the transmission pulley.

- Reroute the new belt around the pulleys and belt keepers, if present, EXACTLY as the old one was routed. Refer to Figure 19.

CLEANING THE ENGINE AND DECK

Any fuel or oil spilled on the machine should be wiped off promptly. Do NOT allow grass, leaves, and dirt to accumulate around the cooling fins of the engine or on any other part of the machine, especially the pulleys and other moving parts.

Clean the underside of the deck with a wisk broom, putty knife or forced air after each mowing.

IMPORTANT: The use a pressure washer or garden hose to clean your tractor is NOT recommended. It may cause damage to electrical components, spindles, pulleys, bearings or the engine. The use of water will result in a shortened life of the tractor and reduce its serviceability.

BATTERY

The battery is sealed and is maintenance-free. Acid levels cannot be checked.

- Always keep the battery cables and terminals clean and free of corrosive build-up.
- After cleaning the battery and terminals, apply a light coat of petroleum jelly or grease to the terminals and over the positive terminal boot.
- Always keep the boot positioned over the positive terminal to prevent shorting.

IMPORTANT: If removing the battery for any reason, disconnect the NEGATIVE (Black) wire from its terminal first, followed by the POSITIVE (Red) wire. When re-installing the battery, always connect the POSITIVE (Red) wire its terminal first, followed by the NEGATIVE (Black) wire. Be certain that the wires are connected to the correct terminals. reversing them could change the polarity and cause damage to your engine's alternating system.

Charging

If the unit has not been put into use for an extended period of time, charge the battery with an automotive-type 12-volt charger for a minimum of one hour at six amps.



WARNING: Batteries give off an explosive gas during and for some time after charging. Charge battery in a well ventilated area and do not allow a spark or an open flame near the battery.

TIRES

The recommended operating tire pressure is approximately 10 psi for the rear tires and 14 psi for the front tires. Refer to the tire sidewall for exact tire manufacturer's recommended psi. Do not overinflate. Uneven tire pressure could cause the cutting deck to mow unevenly.

HYDROSTATIC TRANSMISSION

The hydrostatic transmission is sealed at the factory and is maintenance free. The fluid level cannot be checked nor can the oil be changed. Keep the area around the transmission cooling fan free of grass and debris at all times.

CUTTING BLADES



WARNING: Cutting blades are sharp. Always protect hands by wearing heavy leather work gloves to grasp blades.

The blades may be removed for sharpening or replacement as follows.

- Remove the deck from beneath the tractor, (refer to DECK REMOVAL earlier in this section for detailed instructions) then gently flip the deck over to expose its underside.
- Place a block of wood between the center deck housing baffle and the cutting blade to act as a stabilizer.
- Use a 15/16" wrench to remove the hex flange nut that secures the blade to the spindle assembly.

NOTE: The hex flange nut has a right-handed (normal) thread pattern. Do NOT attempt to force the nut in the incorrect direction.

To properly sharpen the cutting blades, remove equal amounts of metal from both ends of the blades along the cutting edges. See Figure 20.

Sharpen the cutting edge straight across, parallel to the trailing edge, at a 25° to 30° angle. See Figure 20.

IMPORTANT: If the cutting edge of the blade has already been sharpened to within 5/8" of the wind wing radius, or if any metal separation is present, replace the blades with new ones. See Figure 20.

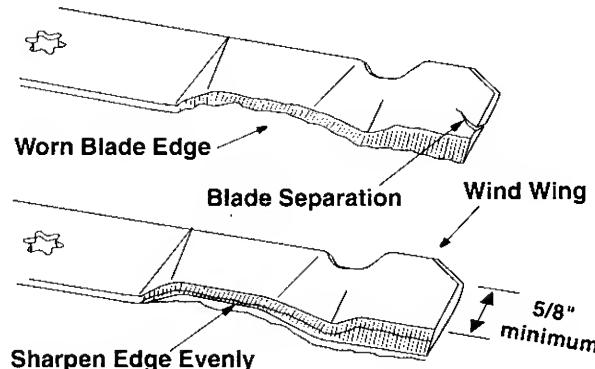


Figure 20

It is extremely important that each cutting blade edge be ground equally to maintain proper blade balance. An unbalanced blade will cause excessive vibration when rotating at high speeds, may cause damage to the tractor and result in personal injury. The blade can be tested by balancing it on a round shaft screwdriver. Grind metal from the heavy side until it balances evenly.

When replacing the blade, be sure to install the blade with the side of the blade marked "Bottom" (or with a part number stamped in it) facing the ground when the mower is in the operating position.

IMPORTANT: Use a torque wrench to tighten the blade spindle hex flange nut to between 70 foot-pounds and 90 foot-pounds.

FUSE

A fuse is installed in your tractor's wiring harness to protect the tractor's electrical system from damage caused by excessive amperage. Always use the same capacity fuse for replacement. If the electrical system does not function, or your tractor's engine will not crank, first check to be certain that the fuse has not blown. It can be found under the hood mounted behind the top of dash panel on the support bar. Pull the fuse out and compare it with Figure 21 to determine if it is good or bad.

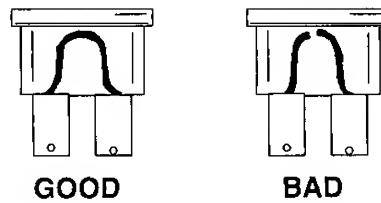


Figure 21

SECTION 11: LUBRICATION



WARNING: *Always stop the engine and disconnect the spark plug wire(s) and ground against the engine before performing any maintenance.*

ENGINE

Lubricate the engine with motor oil as instructed in the separate engine manual packed with your unit.

PIVOT POINTS

Lubricate all pivot points (drive pedal, brake pedal, etc.) at least once a season with light oil.

LINKAGE

Lubricate all the pivot points on the drive, brake and lift linkage at least once a season with SAE 30 engine oil.

STEERING GEAR

Lubricate the teeth of the steering gear with an all-purpose automotive grease every 25 hours of operation.

WHEELS

Both the front wheels and the rear wheels should be removed from the axles once a season. Lubricate the axles and the rims well with an all-purpose automotive grease before re-installing them.

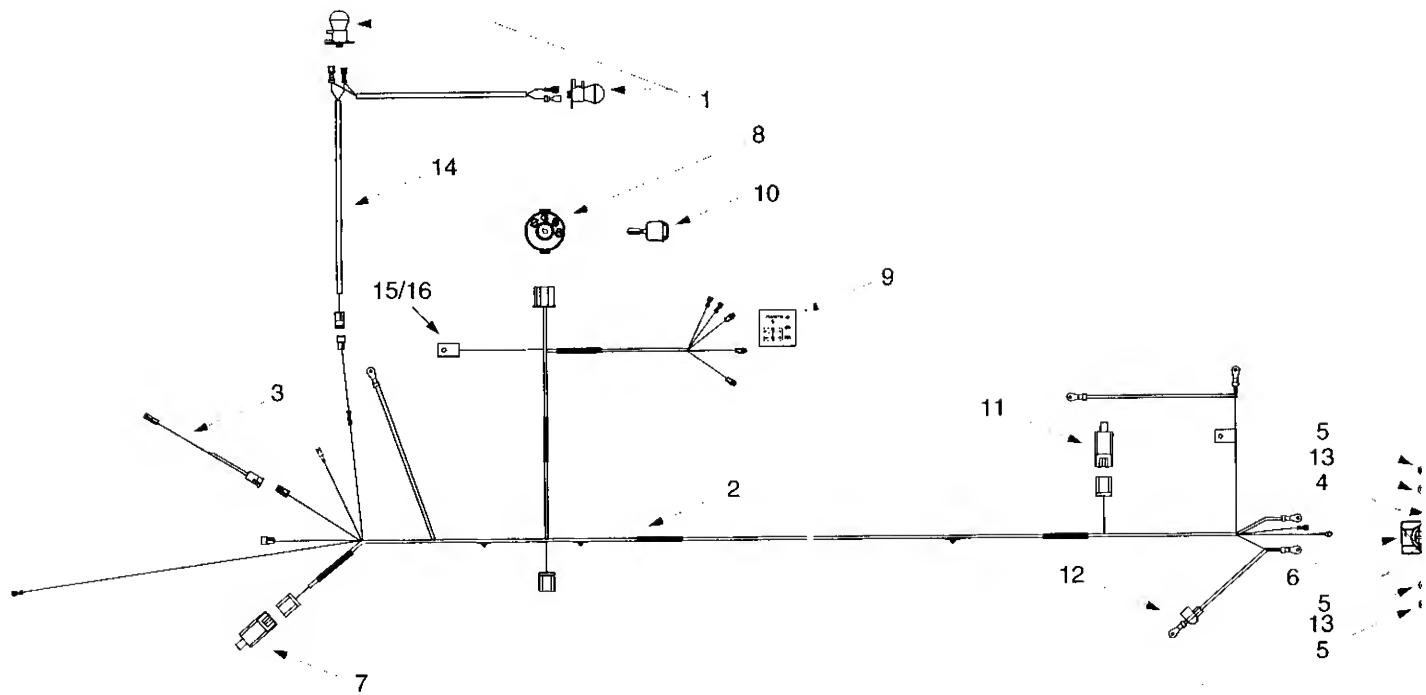
FRONT AXLES

Your tractor may be equipped with grease fittings on the ends of the front pivot bar. Refer Figure 11. Lubricate both the left and the right front axles with a grease gun at least once a season.

SECTION 12: TROUBLESHOOTING GUIDE

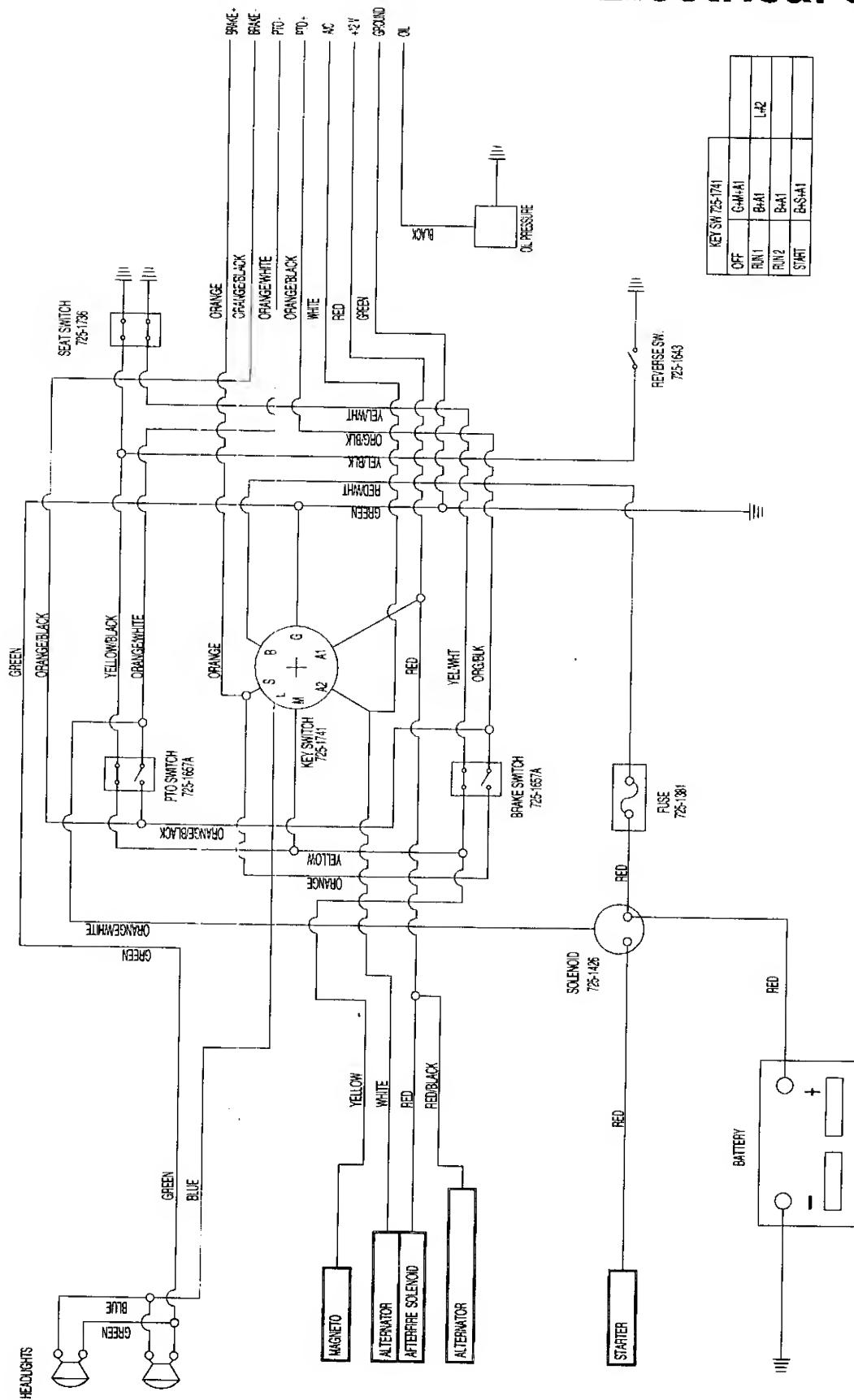
| Trouble | Possible Cause(s) | Corrective Action |
|--|--|---|
| Engine will not crank | Safety switch button not depressed. Battery installed incorrectly. Battery is dead or weak. Blown fuse | <p>There are three safety switches in the starting circuit of your unit: the brake pedal switch, the seat switch and the PTO switch (units with manual PTO only). Make certain the actuator found on the brake control assembly is fully depressing the button on the brake switch. The PTO must be in the disengaged (OFF) position and the operator must be seated on the tractor in order to start the engine, also.</p> <p>The battery must be installed with negative terminal attached to black ground wire. Negative terminal is identified at the post by "NEG", "N" or "-". The positive terminal, identified by "POS", "P" or "+", must be attached to the thick red wire which goes to the solenoid.</p> <p>Charge at six amps with a 12-volt automotive-type battery charger for one hour or until fully charged.</p> <p>Refer to operator's manual for fuse location. Replace fuse with automotive type fuse of the proper amperage. Fuses seldom fail without a reason. The problem must be corrected. Check for loose connections in the fuse holder. Replace fuse holder if necessary. A dead short may be in the cranking or charging circuit where the insulation may have rubbed through and exposed the bare wire. Replace the wire or repair with electrician's tape if the wire strands have not been damaged.</p> <p>Note: Look for a wire pinched between body panels, burned by the exhaust pipe or muffler or rubbed against a moving part.</p> |
| Engine cranks but will not start | Throttle or choke not in starting position. No fuel to the carburetor. No spark to spark plug(s). Dirty aircleaner. | <p>Refer to the OPERATION section of this manual for the correct position of the throttle control and choke for starting.</p> <p>Gasoline tank empty. Fill.</p> <p>Fuel line or in-line fuel filter plugged. Remove and clean fuel line. Replace fuel filter (if so equipped) if necessary.</p> <p>Spark plug lead disconnected. Connect lead. Using a spark tester, check for spark. If no spark is present, have engine's magneto serviced by an authorized engine dealer.</p> <p>If the air cleaner is dirty, the engine may not start. Refer to the engine manual packed with your unit.</p> |
| Engine smokes | Engine oil has been overfilled. Engine loses crankcase vacuum. | <p>Check oil level.</p> <p>Dipstick not seated or broken. Replace defective part.</p> <p>Engine breather defective. Replace.</p> |
| Excessive vibration | Bent blade or damaged pulley. | Stop engine immediately. Check all pulleys, blade adapters, keys and bolts for tightness and spindle damage. Tighten or replace any loose or damaged parts. Always replace damaged blade. Only use original equipment blades. |
| Mower won't discharge grass or leaves uncut strips | Engine speed low. Speed selection. Cutting height set too low. Blades dull. | <p>Throttle must be set at full throttle.</p> <p>Use lower ground speed. The slower your ground speed, the better the quality of cut. Raise deck.</p> <p>Sharpen or replace blades (uncut strip problem only).</p> |

Models 617, 618 & 619

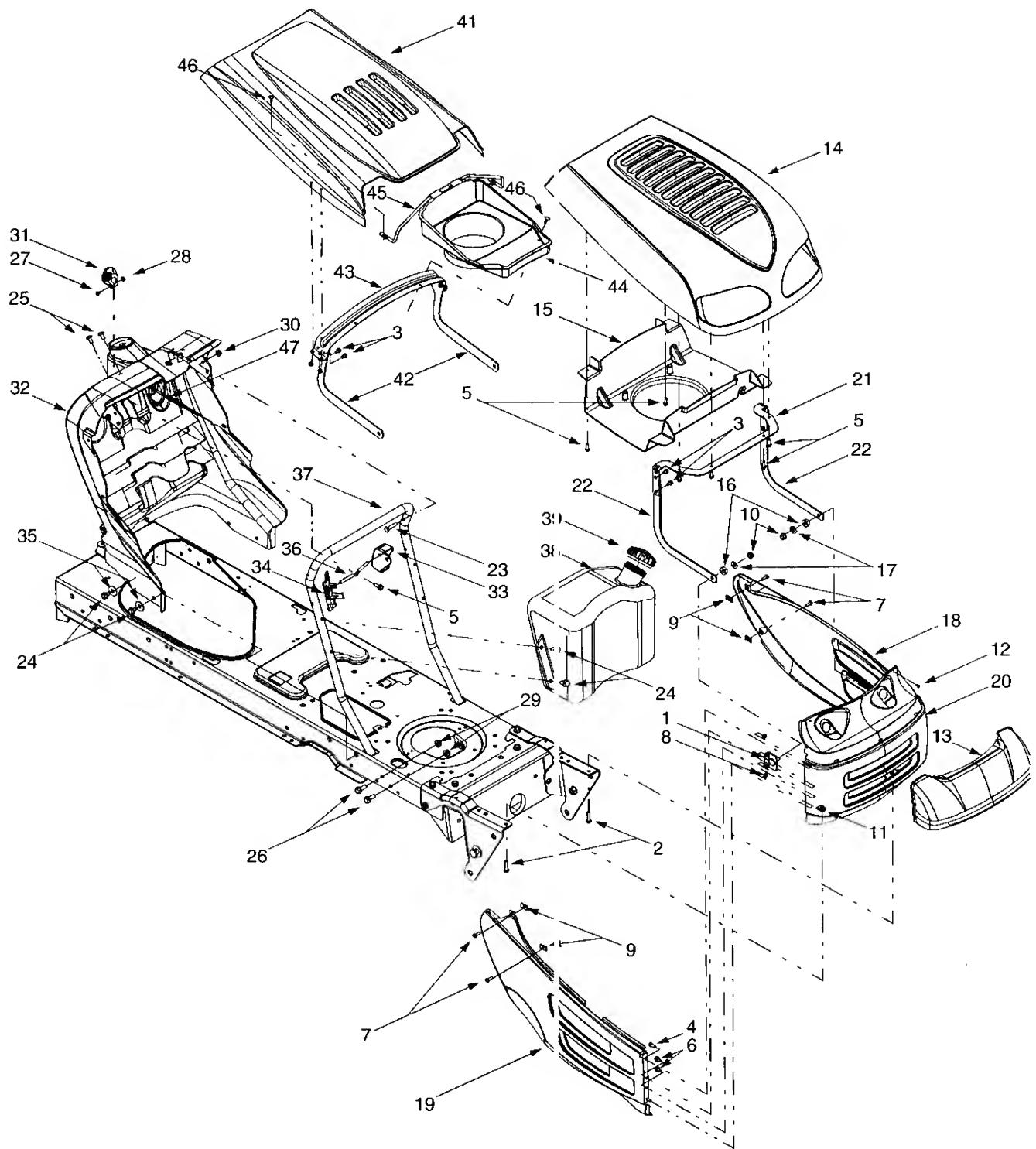


| REF. NO. | PART NO. | DESCRIPTION |
|-------------|-------------|--|
| 1 | 625-0051 | Bulb/Socket Headlight Assembly |
| 2 | 629-0944 | Wiring Harness w/o Ref. 14 |
| 3 | 629-0126 | Harness Adapter, #18 x 5 |
| 4 | 710-0599 | Self-tapping Screw, 1/4-20 x .5 |
| 5 | 712-3006 | Hex Nut, 1/4-20 |
| 6 | 725-1426 | Solenoid, 12-volt, 100 Amp |
| 7 | 725-1657A | Snap Mount Safety Interlock Switch (Brake) |
| 8 | 725-1741 | Ignition Switch |
| 9 | 725-1758 | Systems Indicator Monitor |
| 10 | 725-1745 | Ignition Key w/ plastic cover |
| | 725-1744 | Ignition Key w/o plastic cover |
| 11 | 725-1747 | Safety Plunger Switch (Seat) |
| 12 | 725-3007A | Positive Terminal Cover (Boot) |
| 13 | 736-0329 | Lock Washer, 1/4 |
| 14 | 629-0309 | Headlight Harness |
| 15 | 729-0357 | Fuse Holder |
| 16 | 725-1381 | 20-amp Fuse |

Electrical System



Models 617 & 618

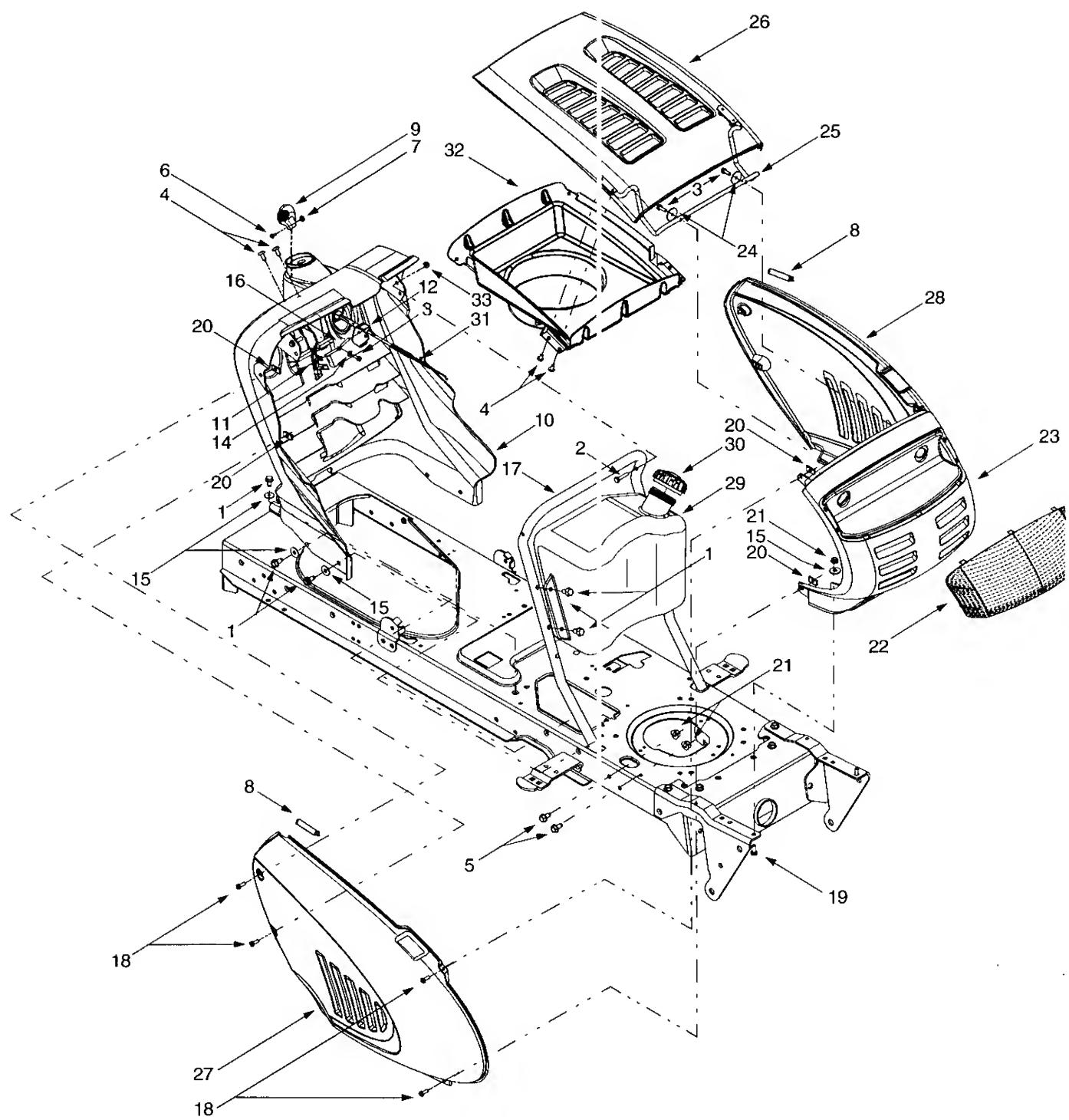


Tractor Body

| REF. NO. | PART NO. | DESCRIPTION | REF. NO. | PART NO. | DESCRIPTION | |
|-------------|-------------|-------------------------------------|-------------|-------------|---|---|
| 1 | 683-0195 | Bracket Assembly | 26 | 710-1238 | Hex Washer Screw, 5/16-18 x .625 | |
| 2 | 710-0528 | Hex Cap Screw, 5/16-18 x 1.25 | 27 | 710-3217 | Truss Phillips Screw, #8-32 x .375 | |
| 3 | 710-0599 | Self-tapping Screw, 1/4-20 x .5 | 28 | 712-0142 | Hex Nut, #8-32 | |
| 4 | 710-0751 | Hex Cap Screw, 1/4-20 x .62 | 29 | 712-3004A | Flange Lock Nut, 5/16-18 | |
| 5 | 710-0895 | Self-tapping Screw, 1/4-15 x .75 | 30 | 712-3027 | Hex Flange Lock Nut, 1/4-20 | |
| 6 | 710-0896 | Screw, 1/4-15 x .75 | 31 | 731-1857 | Throttle Control Knob | |
| 7 | 710-0924 | Phillips Pan Screw, 1/4-20 x .75 | 32 | 731-2122 | Dash Panel | |
| 8 | 712-0271 | Hex Sems Nut, 1/4-20 | 33 | 731-2227 | Parking Brake Button | |
| 9 | 712-0292 | U-type Speed Nut, 1/4-20 | 34 | 731-2228 | Plastic Plug | |
| 10 | 712-0431 | Flange Lock Nut, 3/8-16 | 35 | 736-3078 | Flat Washer, .349 x 1.0 x .063 | |
| 11 | 726-0211 | U-nut, 5/16-18 | 36 | 747-1196 | Pivot Rod | |
| 12 | 726-0293 | Retainer Nut, 3/8 | 37 | 749-1087 | Dash Support Tube | |
| 13 | 731-1854 | Headlight Lens | 38 | 751-0659 | Two-gallon Fuel Tank (shown) | |
| 14 | 731-2300 | Hood, 7-style, Red | | 751-0658 | Three-gallon Fuel Tank | |
| | 731-2301 | Hood, 7-style, Green | 39 | 751-0603 | Fuel Cap (Fits Either Tank) | |
| | 731-2302 | Hood, 7-style, Black | 40 | 710-1268 | Screw, #10-16 x .375 | |
| | 731-2303 | Hood, 7-style, Charcoal Grey | 41 | 783-0478A | Hood, 8-style | |
| 15 | 731-2306 | Hood Plenum, 7-style | 42 | 783-0551A | Hood Hinge Bracket, 8-style | |
| 16 | 735-0126 | Rubber Washer, .87 x .33 | 43 | 783-0553A | Hood Support Bracket, 8-style | |
| 17 | 736-0105 | Bell Washer, .401 x .87 x .063 | 44 | 731-2247 | Heat Shield‡ (Units w/ B&S OHV Twin) | |
| 18 | 783-0475 | LH Side Panel | | 731-2248 | Heat Shield‡ (Units w/ B&S Opposed Twin) | |
| 19 | 783-0476A | RH Side Panel | | 45 | 747-1184 | Heat Shield Support Rod |
| 20 | 783-0477 | Grille | | 46 | 726-3046 | Ratchet Clip |
| 21 | 783-1034 | Hood Bracket, 7-style | | 47 | 746-1085 | Choke Cable/Knob † (Units w/ B&S Opposed Twin or OHV Twin) |
| 22 | 783-1038 | Hood Side Bracket, 7-style | | | | |
| 23 | 710-0106 | Hex Cap Screw, 1/4-20 x 1.25 | | | | |
| 24 | 710-0604A | Self-tapping Screw, 5/16-18 x .625 | | | | |
| 25 | 710-1017 | Truss Phillips Screw, 1/4-20 x .625 | | | | |

†Tractors with a B&S Single-cylinder (I/C or OHV) engine have NO choke knob/cable. The choke is activated with the throttle control.
‡Tractors with a B&S Single-cylinder (I/C or OHV) engine have NO heat shield.

Model 619



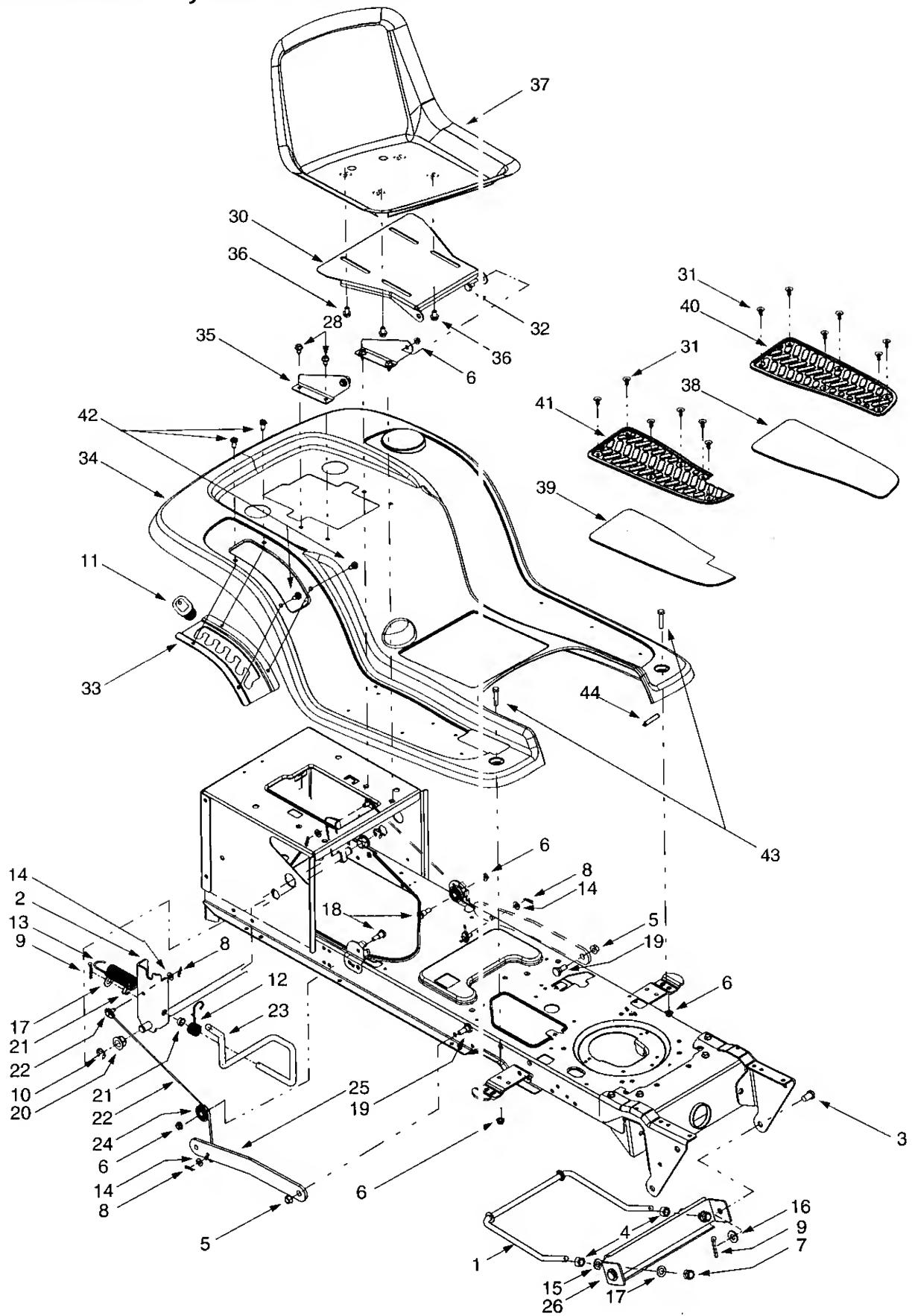
Tractor Body

| REF. NO. | PART NO. | DESCRIPTION |
|-------------|-------------|---|
| 1 | 710-0604A | Self-tapping Screw, 5/16-18 x .625 |
| 2 | 710-0788 | Self-tapping Screw, 1/4-20 x 1.0 |
| 3 | 710-0895 | Self-tapping Screw, 1/4-15 x .75 |
| 4 | 710-1017 | Torx Self-tapping Screw, 5/16-18 x .625 |
| 5 | 710-1238 | Screw, 5/16-18 x .875 (Grade 5) |
| 6 | 710-3217 | Torx Screw, #8-32 x .375 |
| 7 | 712-0142 | Hex Nut, 8-32 |
| 8 | 731-0511-5 | Five-inch Trim Strip |
| 9 | 731-1857 | Throttle Control Lever |
| 10 | 731-2122 | Dash Panel |
| 11 | 731-2228 | Plastic Plug |
| 12 | 731-2227 | Parking Brake Button |
| 13 | 736-0119 | Lock Washer, 5/16 |
| 14 | 736-0142 | Flat Washer, .281 x .5 x .063 |
| 15 | 736-3078 | Flat Washer, .349 x 1.0 x .063 |
| 16 | 747-1196 | Pivot Rod |
| 17 | 749-1087 | Dash Support Tube |
| 18 | 710-0924 | Pan Phillips Screw, 1/4-20 x .75 |
| 19 | 710-3008 | Hex Cap Screw, 5/16-18 x .75 |
| 20 | 712-0292 | U-type Speed Nut, 1/4-20 |
| 21 | 712-3004A | Flange Lock Nut, 5/16-18 |
| 22 | 731-2118 | Lens, 9-style |
| 23 | 731-2119 | Grille, 9-style |
| 24 | 736-0211 | Flat Washer, .285 x 1.25 x .08 |
| 25 | 747-1162 | Hood Hinge Rod |
| 26 | 783-0783 | Hood, 9-style |
| 27 | 783-0784 | RH Side Pane, 9-style |
| 28 | 783-0785 | LH Side Panel, 9-style |
| 29 | 751-0659 | Two-gallon Fuel Tank (shown) |
| | 751-0658 | Three-gallon Fuel Tank |
| 30 | 751-0603 | Fuel Cap (Fits Either Tank) |
| 31 | 746-1085 | Choke Knob/Cable Assembly† (Units w/ B&S Opposed Twin or OHV Twin) |
| 32 | 731-2270 | Hood Plenum (Units w/ B&S OHV V-Twin)‡ |
| | 731-2271 | Hood Plenum (Units w/ B&S Opposed Twin)‡ |
| 33 | 712-3027 | Hex Flange Lock Nut, 1/4-20 |

†Units with B&S OHV Single engines have NO choke knob/cable. The choke is activated with the throttle control.

‡Units with B&S OHV Single engines have NO hood plenum.

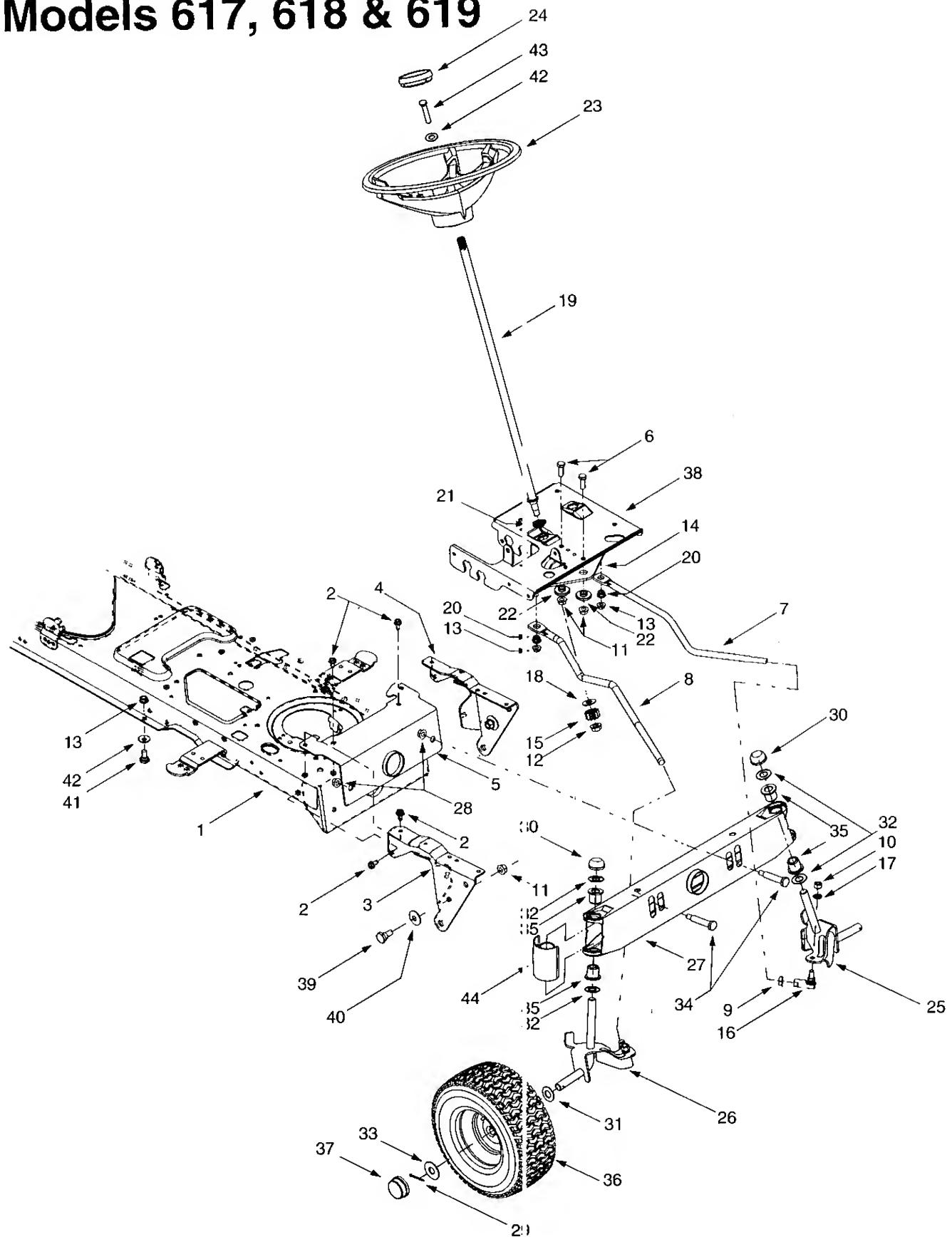
Models 617, 618 & 619



Lift Assembly

| REF. NO. | PART NO. | DESCRIPTION |
|-------------|-------------|--|
| 1 | 747-1130 | Deck Stabilizer Rod |
| 2 | 683-0197 | Lift Shaft Assembly |
| 3 | 711-0332 | Clevis Pin, .5 x .78 |
| 4 | 712-0206 | Hex Nut, 1/2-13 |
| 5 | 712-0431 | Flange Lock Nut, 3/8-16 |
| 6 | 712-3004A | Flange Lock Nut, 5/16-18 |
| 7 | 712-3083 | Hex Nut, 1/2-13 |
| 8 | 714-0104 | Internal Cotter Pin |
| 9 | 714-0111 | Cotter Pin |
| 10 | 716-0106 | E-ring |
| 11 | 720-0311 | Handle Grip |
| 12 | 732-0874 | Torsion Spring |
| 13 | 732-0934 | Lift-assist Spring, 1.15 x 5.99 (Found on Units w/ 46-inch Deck Only) |
| 14 | 736-0275 | Flat Washer, 5/16 |
| 15 | 736-0921 | Lock Washer, 1/2 |
| 16 | 736-3019 | Flat Washer, .31 x 1.062 x .134 |
| 17 | 736-3084 | Flat Washer, .51 x 1.12 x .06 |
| 18 | 738-0138 | Hex Cap Screw, 5/16-18 x .62 |
| 19 | 738-0380 | Shoulder Screw, .5 x .27, 3/8-16 |
| 20 | 741-0225 | Hex Flange Bearing |
| 21 | 741-0715 | Snap Flange Bearing |
| 22 | 746-0968 | Lift Cable, 16.16 |
| 23 | 747-1111 | Lift Handle |
| 24 | 756-1154 | Roller Pulley |
| 25 | 783-0678 | Arm Lift |
| 26 | 783-0720A | Deck Stabilizer Bracket |
| 27 | 710-0260 | Carriage Bolt, 5/16-18 x .62 |
| 28 | 710-0604A | Self-tapping Screw, 5/16-18 x .625 |
| 29 | 710-0895 | Self-tapping Screw, 1/4-15 x .75 |
| 30 | 783-0740 | Seat Pivot Bracket |
| 31 | 726-3046 | Foot Pad Clips |
| 32 | 738-0155 | Shoulder Screw, .437 x 1.62 |
| 33 | 783-1010 | Lift Adjustment Bracket |
| 34 | 783-0840 | Fender |
| 35 | 783-0715 | Seat Mounting Bracket |
| 36 | 710-0870 | Hex Washer Head Screw, 3/8-16 x .625 |
| 37 | 757-0360A | Seat, Medium Back |
| | 757-0348A | Seat, High Back (if so equipped) |
| | 757-0350 | Seat, High Back w/ Drain Holes (if so equipped) |
| 38 | 723-0483 | LH Abrasive Foot Pad |
| 39 | 723-0484 | RH Abrasive Foot Pad |
| 40 | 735-0657 | LH Rubber Foot Pad (if so equipped) |
| 41 | 735-0656 | RH Rubber Foot Pad (if so equipped) |
| 42 | 710-1611 | Self-tapping Screw, 5/16-18 x .75 |
| 43 | 710-0260 | Hex Cap Screw, 5/16-18 x .62 |
| 44 | 731-0511-5 | Trim Strip, 1.5 |

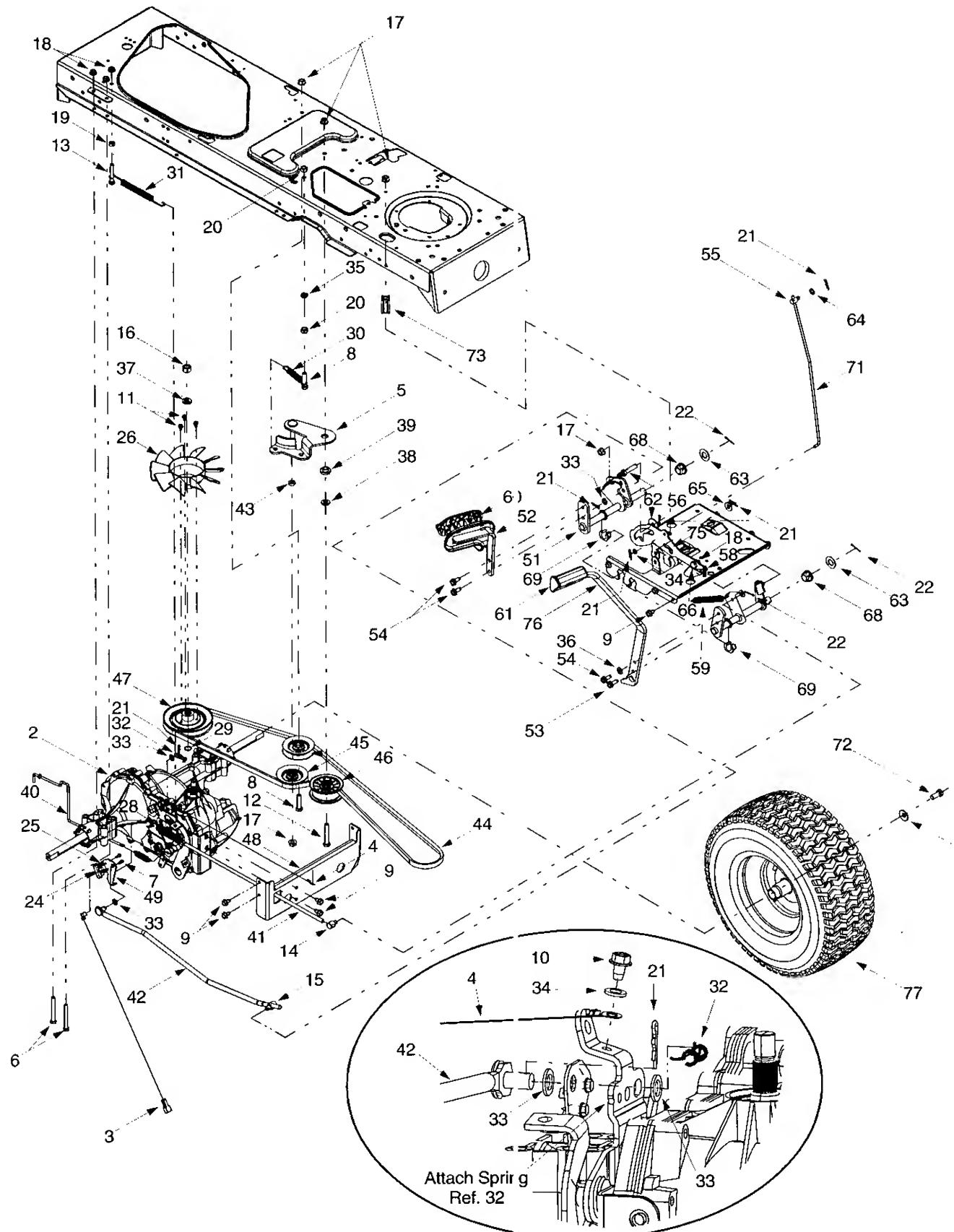
Models 617, 618 & 619



Steering Assembly

| REF. NO. | PART NO. | DESCRIPTION | REF. NO. | PART NO. | DESCRIPTION |
|-------------|-------------|--|-------------|-------------|--|
| 1 | 683-0304 | Lower Frame Assembly | 28 | 712-0431 | Flange Lock Nut, 3/8-16 |
| 2 | 710-0604A | Self-tapping Screw, 16-18 x .625 | 29 | 714-0470 | Cotter Pin |
| 3 | 783-0726A | RH Pivot Support Bracket | 30 | 726-0214 | Push Cap, .625 |
| 4 | 783-0727 | LH Pivot Support Bracket | 31 | 726-0341 | Push Cap, .750 |
| 5 | 783-0728 | Pivot Bar Bracket | 32 | 736-0162 | Flat Washer, .64 x 1.0 x .12 |
| 6 | 710-0514 | Hex Cap Screw, 3/8-16 x 1 (Grade 5) | 33 | 736-0187 | Flat Washer, .64 x 1.24 x .06 |
| 7 | 711-1409A | LH Drag Link | 34 | 736-0316 | Flat Washer, .78 x 1.59 x .06 |
| 8 | 711-1408 | RH Drag Link | 35 | 736-0285 | Flat Washer, .635 x 1.589 x .06 |
| 9 | 712-0240 | Jam Nut, 7/16-20 (Grade 2) | 36 | 738-1011 | Shoulder Screw, .5 x 2.2, 3/8-16 |
| 10 | 712-0241 | Hex Nut, 3/8-24 (Grade 2) | 37 | 741-0659 | Flange Bearing, .632 ID x .937 OD |
| 11 | 712-0431 | Flange Lock Nut, 3/8-16 | 38 | 741-0660 | Flange Bearing, .760 ID x .937 OD |
| 12 | 712-0459 | Flange Lock Nut, 7/16-20 | 39 | 634-0105A | Wheel Assembly Complete, 15 x 6 x 6 Square Shoulder |
| 13 | 712-3004A | Flange Lock Nut, 5/16-18 | 40 | 634-0056A | Wheel Assembly Complete, 15 x 6 x 6 Round Shoulder |
| 14 | 717-1550A | Steering Gear, 11/90 Ratio | 41 | 634-0172 | Rim Only |
| 15 | 717-1554 | Steering Pinion Gear | 42 | 734-0255 | Air Valve (Not Shown) |
| 16 | 723-0448A | Ball Joint, 7/16-20 | 43 | 734-1731 | Tire Only, Square Shoulder |
| 17 | 736-0169 | Lock Washer, 3/8 | 44 | 734-0864 | Tire Only, Round Shoulder |
| 18 | 736-3084 | Flat Washer, .51 x 1.12 x .06 | 45 | 741-0487A | Plastic Flange (Not Shown) |
| 19 | 738-1001A | Steering Shaft, .625 OD x 24.4 | 46 | 741-0706 | Plastic Flange w/ Fitting (Not Shown) |
| 20 | 741-0475 | Plastic Bushing, .38 ID | 47 | 734-0484A | Hub Cap |
| 21 | 741-0656 | Hex Flange Bearing, 5/8 | 48 | 783-0653C | Steering Support Bracket |
| 22 | 738-0372 | Shoulder Spacer, .38 ID | 49 | 738-0143 | Shoulder Screw, 3/8-16 |
| 23 | 631-0027 | Steering Wheel | 50 | 736-0331 | Bell Washer, .39 x 1.13 x .062 |
| | 731-1687 | Steering Wheel (MTD) | 51 | 738-0140 | Shoulder Screw, .435 x .178, 5/16 x .56 |
| 24 | 731-0220 | Steering Wheel Cap | 52 | 736-0242 | Bell Washer, .34 x .872 |
| | 731-1459A | Steering Wheel Cap w/ Icon | 53 | 710-0643 | Hex Bolt, 5/16-18 X 1 |
| 25 | 638-0019 | LH Axle Assembly, .625 Diameter | 54 | 731-1649 | End Cap |
| | 638-0021 | LH Axle Assembly, .625 / .750 Diameter | 55 | 731-1291A | End Cap w/ Fitting (if so equipped) |
| 26 | 638-0020 | RH Axle Assembly, .625 Diameter | | | |
| | 638-0022 | RH Axle Assembly, .625 / .750 Diameter | | | |
| 27 | 683-0128A | Pivot Bar | | | |

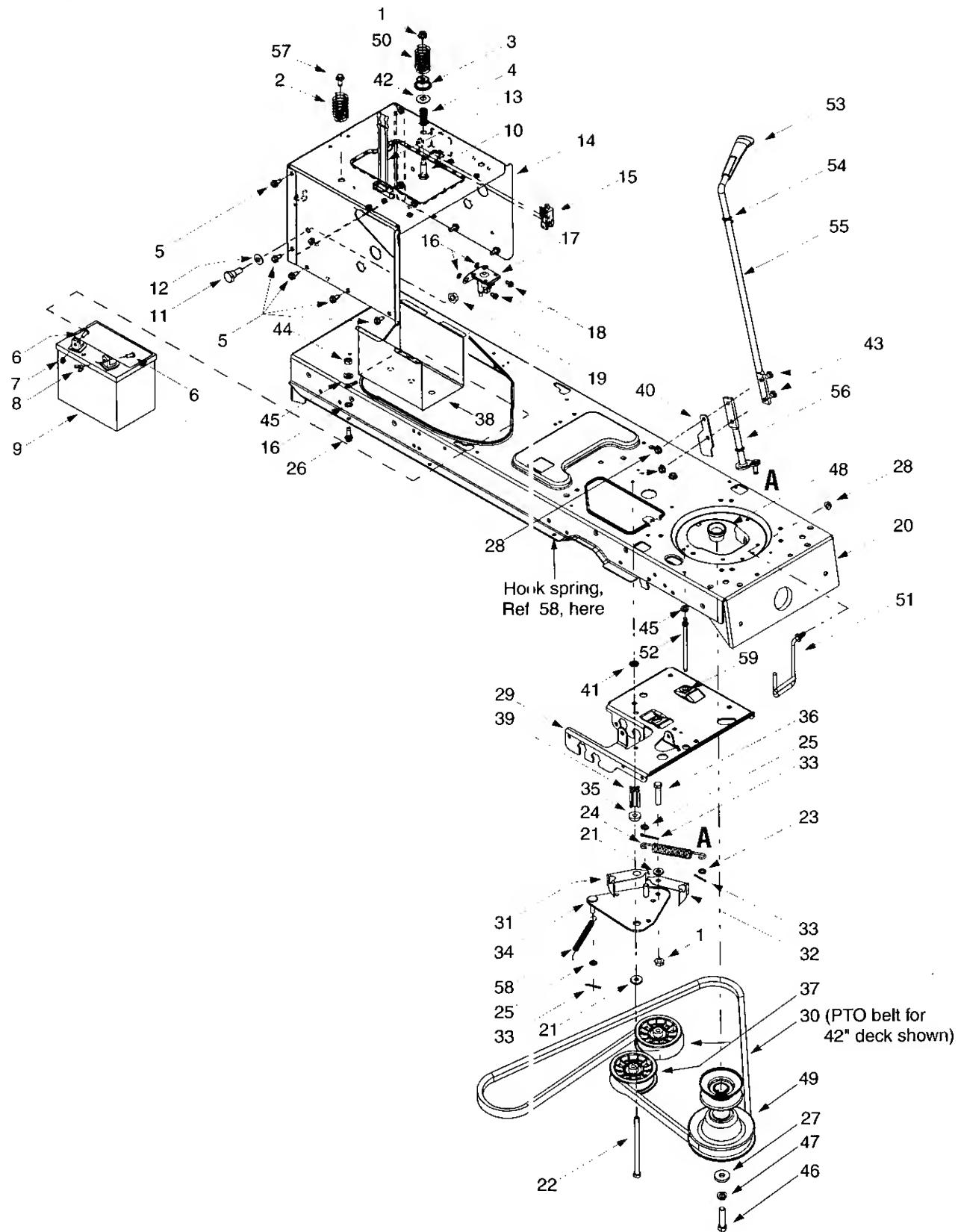
Models 617, 618 & 619



Drive System

| REF. NO. | PART NO. | DESCRIPTION | REF. NO. | PART NO. | DESCRIPTION |
|-------------|-------------|------------------------------------|-------------|-------------|--|
| 1 | 17840 | Transaxle Mounting Bracket | 45 | 756-0116 | V-idler Pulley, 3.06 |
| 2 | 618-0319 | Hydrostatic Transmission | 46 | 756-0981 | Flat Idler Pulley, 2.75 |
| 3 | 629-0922 | Reverse Wire Harness Adapter | 47 | 756-1166 | Input Pulley, 5.0 |
| 4 | 629-0933 | Reverse Wire Harness Ground | 48 | 783-0810 | Transmission Torque Bracket |
| 5 | 683-0251 | Double Idler Bracket Assembly | 49 | 783-1019 | Switch Actuator Bracket |
| 6 | 710-0176 | Hex Cap Screw, 5/16-18 x 2.75 | 50 | 647-0031 | Brake Control Assembly |
| 7 | 710-0227 | Screw, #8-18 x .5 | 51 | 647-0049 | Drive Control Assembly |
| 8 | 710-0344 | Hex Cap Screw, 3/8-16 x 1.5 | 52 | 683-0267A | Hydro Pedal Assembly |
| 9 | 710-0604A | Self-tapping Screw, 5/16-18 x .625 | 53 | 710-0650 | Self-tapping Screw, 5/16-18 x .875 |
| 10 | 710-0653 | Self-tapping Screw, 1/4-20 x .375 | 54 | 710-1260A | Self-tapping Screw, 5/16-18 x .75 |
| 11 | 710-3007 | Screw, #12-24 x .375 | 55 | 711-0736 | Ferrule, 1/4-20 |
| 12 | 710-3011 | Hex Cap Screw, 3/8-16 x 2.25 | 56 | 711-1363 | Pin, 3/8-16 x 2.43 |
| 13 | 710-3103 | Hex Cap Screw, 5/16-18 x 2.0 | 57 | 732-0437 | Compression Spring, .34 OD x 1.0 |
| 14 | 711-0677 | Ferrule, 5/16-18 | 58 | 732-0955 | Extension Spring, .50 OD x 1.41 |
| 15 | 711-0832 | Ferrule, 3/8-24 | 59 | 732-0963 | Extension Spring, .50 OD x 6.37 |
| 16 | 712-0333 | Hex Nut, 1/2-20 | 60 | 735-0662 | Drive Pedal Pad |
| 17 | 712-0431 | Flange Lock Nut, 3/8-16 | 61 | 735-3049 | Brake Pedal Pad |
| 18 | 712-3004A | Flange Lock Nut, 5/16-18 | 62 | 736-0133 | Flat Washer, .411 x 1.25 x 1.0 |
| 19 | 712-3010 | Hex Nut, 5/16-18 | 63 | 736-0187 | Flat Washer, .64 x 1.24 x .06 |
| 20 | 712-3017 | Hex Nut, 3/8-16 | 64 | 736-0204 | Flat Washer, .344 x .062 x .03 |
| 21 | 714-0104 | Internal Cotter Pin | 65 | 736-3004 | Flat Washer, .406 x .875 x .105 |
| 22 | 714-0111 | Cotter Pin | 66 | 738-0155 | Shoulder Screw, .437 x 1.62 |
| 23 | 725-0157 | Cable Tie | 67 | 738-0507B | Shoulder Screw, .5 x .434 |
| 24 | 725-1644 | Short Spring Switch | 68 | 741-0225 | Hex Flange Bearing |
| 25 | 726-0320 | Insulator Nut Plate | 69 | 741-3065A | Split Hex Flange Bearing |
| 26 | 731-1449A | 10-inch Fan | 70 | 736-0242 | Bell Washer, .34 x .872 |
| 27 | 732-0209 | Extension Spring, .48 x 2.03 | 71 | 747-1138 | Brake Lock Control Rod |
| 28 | 732-0716 | Extension Spring, .59 x 4.0 | 72 | 710-0627 | Hex Cap Screw, 5/16-24 x .75 |
| 29 | 732-0729 | Wire Ring | 73 | 748-0415A | Spacer, 5/16 x 1.54 |
| 30 | 732-0965 | Extension Spring, .5 x 3.5 | 74 | 783-0653C | Steering Support Bracket |
| 31 | 732-0994 | Extension Spring, .5 x 7.0 | 75 | 783-0663A | Drive Lockout Bracket |
| 32 | 732-3118 | Extension Spring, 3/8 x 1.44 | 76 | 783-0773 | Brake Pedal |
| 33 | 736-0140 | Flat Washer, .385 x .62 x .063 | 77 | 634-0177 | Wheel Assembly Complete, 20 x 10 x 8, Square Shoulder |
| 34 | 736-0142 | Flat Washer, .281 x .50 x .063 | | 634-0104 | Wheel Assembly Complete 20 x 8 x 8, Square Shoulder |
| 35 | 736-0169 | Lock Washer, 3/8 | | 734-1675 | Wheel Assembly Complete 20 x 8 x 8, Round Shoulder |
| 36 | 736-0275 | Flat Washer, .344 x .688 x .065 | | 634-0077 | Rim Only |
| 37 | 736-0921 | Lock Washer, 1/2 | | 734-0255 | Air Valve (Not Shown) |
| 38 | 736-3010 | Flat Washer, .407 x .812 x .135 | | 734-1873 | Tire Only, 20 x 10 x 8, Square Shoulder |
| 39 | 738-0372 | Shoulder Spacer, .38 | | 734-1730 | Tire Only, 20 x 8 x 8, Square Shoulder |
| 40 | 747-1149 | Hydrostatic Bypass Rod | | 734-1596 | Tire Only, 20 x 8 x 8, Round Shoulder |
| 41 | 747-1150 | Hydrostatic Brake Rod | | | |
| 42 | 747-1151 | Hydrostatic Control Rod | | | |
| 43 | 750-0535 | Spacer, .376 x .625 x .22 | | | |
| 44 | 754-0349 | Drive Belt | | | |

Models 617, 618 & 619

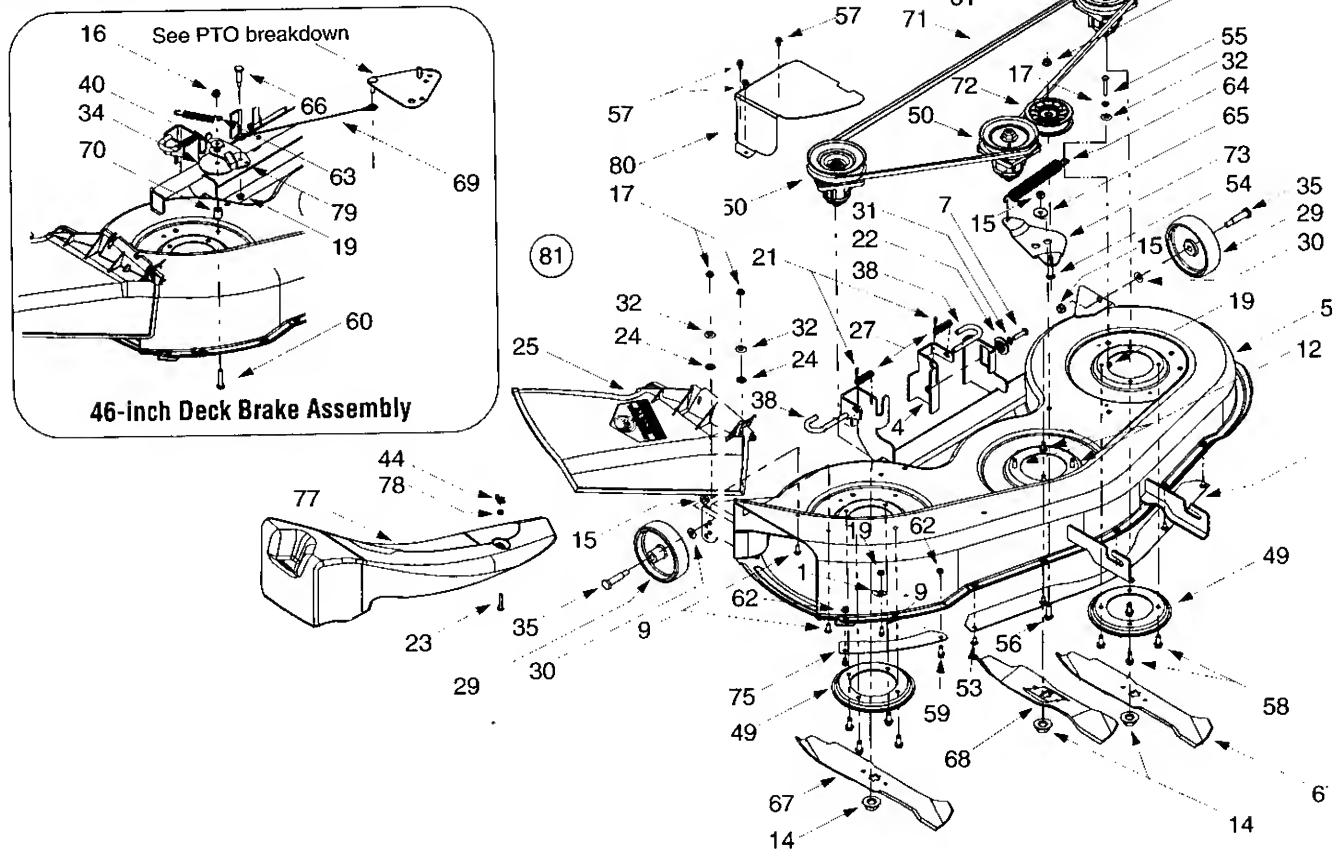


Power Take-off System

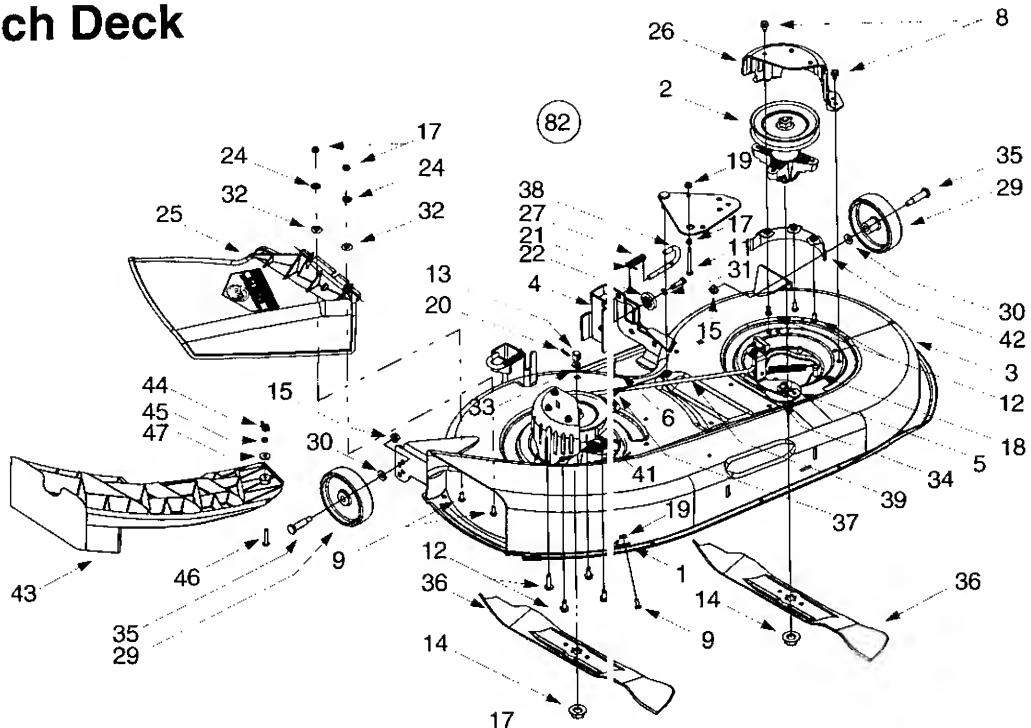
| REF. NO. | PART NO. | DESCRIPTION | REF. NO. | PART NO. | DESCRIPTION |
|-------------|-------------|------------------------------------|-------------|-------------|--|
| 1 | 712-0431 | Flange Lock Nut, 3/8-16 | 31 | 732-0991 | Belt Guard |
| 2 | 732-0996 | Compression Spring, 1.31 x 3.0 | 32 | 732-0990 | Belt Guard |
| 3 | 783-0733 | Spacer Cup, 1.5 OD | 33 | 714-0470 | Cotter Pin, 1/8 x 1.25 |
| 4 | 732-0997 | Compression Spring, .66 OD x 1.5 | 34 | 683-0302 | PTO Engagement Plate |
| 5 | 710-0604A | Self-tapping Screw, 5/16-18 x .625 | 35 | 738-0372 | Shoulder Spacer |
| 6 | 710-0751 | Hex Cap Screw, 1/4-20 x .62 | 36 | 710-3011 | Hex Cap Screw, 3/8-16 x 2.25 (Grade 5) |
| 7 | 712-0271 | Hex Sems Nut, 1/4-20 | 37 | 756-0627 | Flat Idler Pulley, 3.5 OD |
| 8 | 712-3044 | Wing Nut, 1/4-20 | 38 | 783-0349 | Battery Tray |
| 9 | 725-1706 | 12-volt Battery, 270 CCA | 39 | 748-0415A | Spacer, 3/8 x 1.54 |
| 10 | 738-1014 | Shoulder Screw, .5 x 1.25, 3/8-16 | 40 | 783-0744A | Engagement Stop Bracket |
| 11 | 738-1020 | Shoulder Screw, .625 x .5, 7/16-20 | 41 | 712-0229 | Push Nut, 3/8 |
| 12 | 736-0407 | Bell Washer, .45 x 1.0 x .062 | 42 | 736-0105 | Bell Washer, .401 x .870 x .063 |
| 13 | 723-0444 | Battery Strap | 43 | 710-0376 | Hex Cap Screw, 5/16-18 x 1.0 |
| 14 | 783-1031 | Hitch Plate | 44 | 712-3006 | Hex Nut, 1/4-20 |
| 15 | 725-1747 | Safety Interlock Plunger Switch | 45 | 736-0119 | Lock Washer, 5/16 |
| 16 | 736-0222 | Lock Washer, 1/4 | 46 | 710-3029 | Hex Cap Screw, 7/16-20 x 1.25 |
| 17 | 725-1426 | Solenoid, 12-Volt, 100 Amp | 47 | 736-0171 | Lock Washer, 7/16 |
| 18 | 710-0599 | Self-tapping Screw, 1/4-20 x .5 | 48 | 750-0956 | Spacer |
| 19 | 712-0459 | Flange Lock Nut, 7/16-20 | 49 | 756-0983A | Engine Pulley |
| 20 | 683-0304 | Lower Frame Assernby | 50 | 732-0735 | Extension Spring, 1.318 x 2.37 |
| 21 | 736-3010 | Flat Washer, .407 x .812 x .135 | 51 | 647-0053 | Belt Guard |
| 22 | 710-0831 | Hex Cap Screw, 3/8-16 x 5.5 | 52 | 711-1044 | Keeper Pin |
| 23 | 736-0275 | Flat Washer, .344 x .688 x .065 | 53 | 731-2111A | PTO Knob |
| 24 | 732-0944 | Extension Spring, .75 x 5.39 | 54 | 736-0108 | Flat Washer, .510 x .750 x .033 |
| 25 | 736-0140 | Flat Washer, .385 x .62 x .063 | 55 | 747-1112A | PTO Handle |
| 26 | 710-0642 | Self-tapping Screw, 1/4-20 x .750 | 56 | 647-0046 | PTO Lever |
| 27 | 736-0322 | Flat Washer, .45 x 1.25 x .164 | 57 | 710-0650 | Self-tapping Screw, 15/16-18 x .875 |
| 28 | 712-3004A | Flange Lock Nut, 5/16-18 | 58 | 732-0995 | Extension Spring, .5 x 6.0 |
| 29 | 783-0653C | Steering Support Bracket | 59 | 741-0708 | Hex Split Flange Bearing |
| 30 | 754-0485 | PTO Belt (42-inch Decks) | | | |
| | 754-0486 | PTO Belt (46-inch Decks) | | | |

Models 617, 618 & 619

46-inch Deck



42-inch Deck

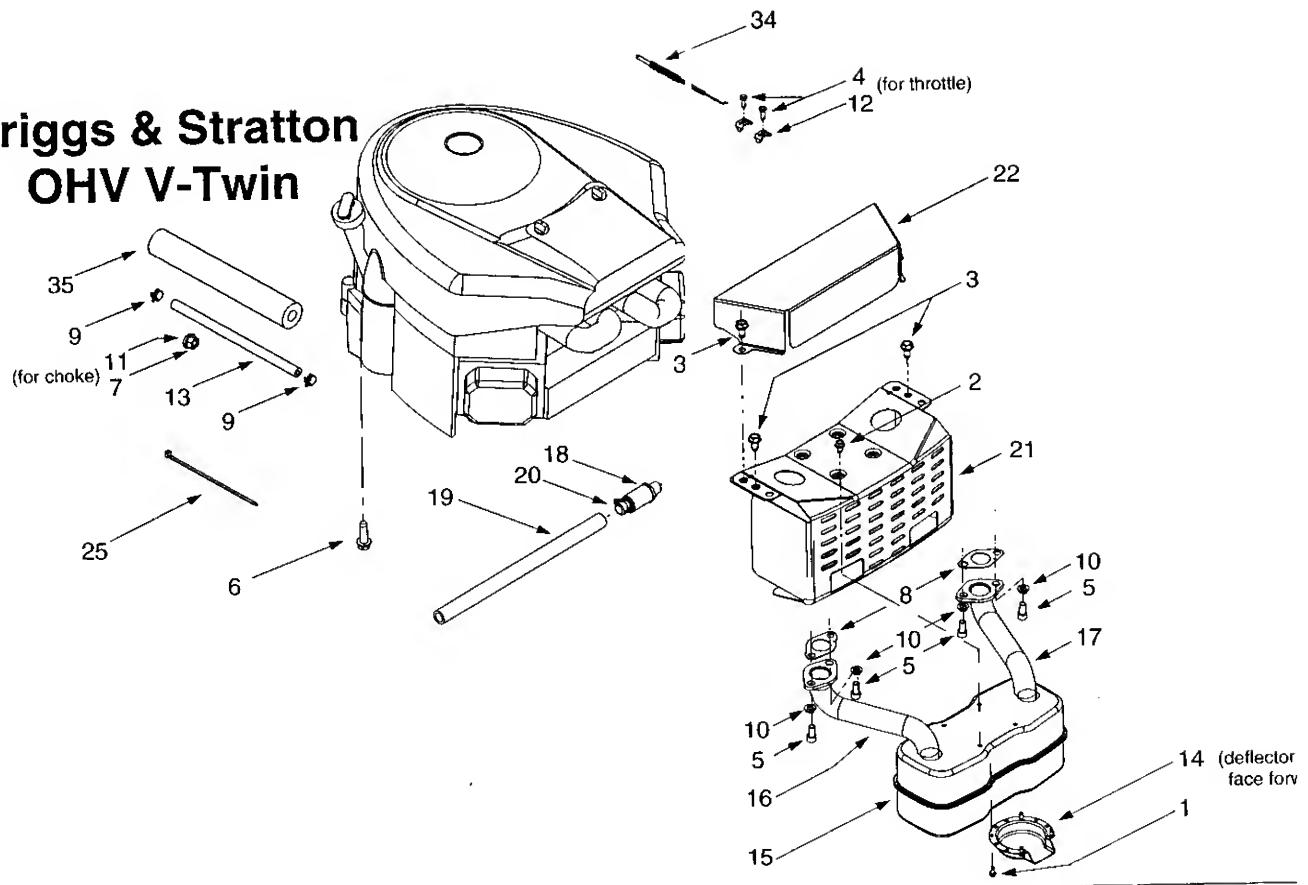


Cutting Decks

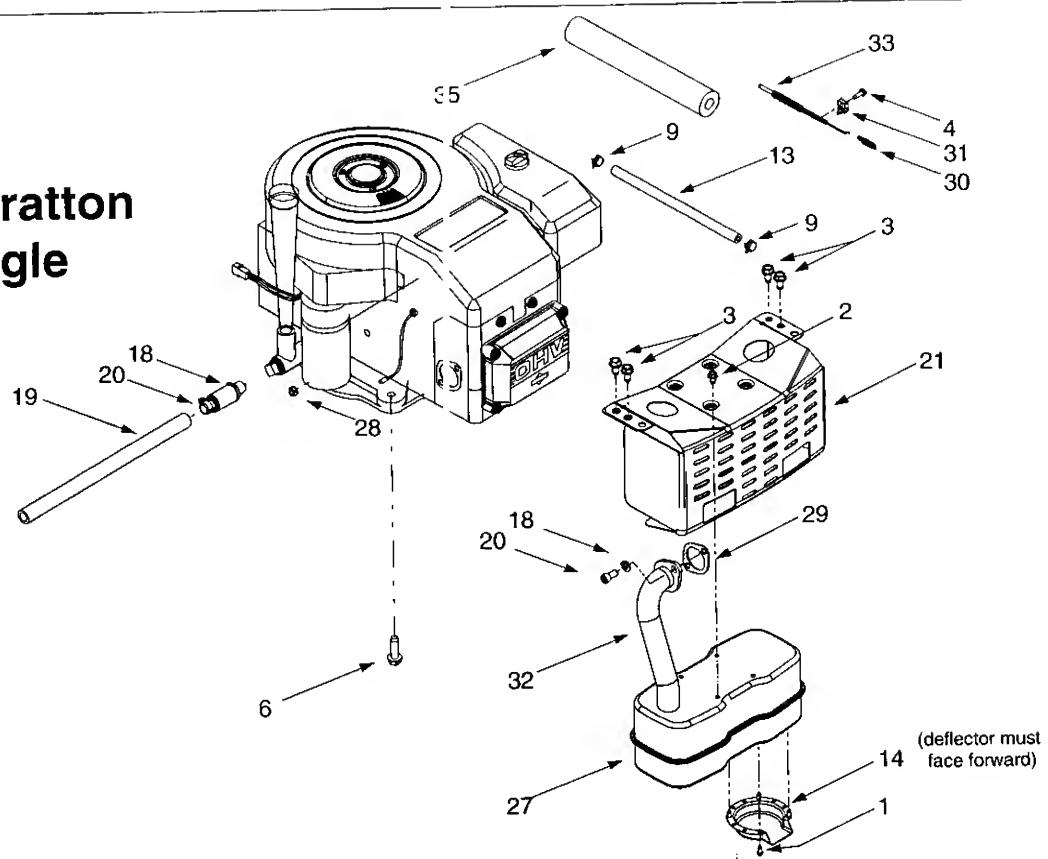
| REF. NO. | PART NO. | DESCRIPTION | REF. NO. | PART NO. | DESCRIPTION |
|-------------|-------------|---|-------------|-------------|---|
| 1 | 16606 | Retainer Hook | 44 | 712-3087 | Wing Nut, 1/4-20 (if so equipped) |
| 2 | 618-0324 | Spindle Assembly, 5.75 Dia. | 45 | 712-3006 | Hex Nut, 1/4-20 (if so equipped) |
| 3 | 683-0198C | 42-inch Deck Shell | 46 | 710-0597 | Hex Cap Screw, 1/4-20 x 1.0 (if so equipped) |
| 4 | 683-0254 | Deck Adjustment Bracket w/ Weld Nut | 47 | 736-0173 | Flat Washer, .28 x .74 x .063 |
| 5 | 683-0303 | Deck Brake Assembly, 42-inch Decks | 48 | 17258A | RH Belt Cover Bracket |
| 6 | 710-0520 | Hex Cap Screw, 3/8-16 x 1.5 | 49 | 17928 | Reinforcement Spindle Plate |
| 7 | 710-0528 | Hex Cap Screw, 5/16-18 x 1.25 | 50 | 618-0240 | Spindle Assembly, 5.0 Dia. |
| 8 | 710-0604A | Self-tapping Screw, 5/16-18 x .625 | 51 | 618-0241 | Double Pulley Spindle Assembly |
| 9 | 710-0751 | Hex Cap Screw, 1/4-20 x .62 | 52 | 683-0265C | 46-inch Deck Shell |
| 10 | 710-0817 | Self-tapping Screw, 5/16-18 x 1.25 | 53 | 710-0167 | Carriage Screw, 1/4-20 x .50 |
| 11 | 710-1122 | Hex Cap Screw, 1/4-20 x 2.5 | 54 | 710-0347 | Hex Cap Screw, 3/8-16 x 1.75 |
| 12 | 710-1260A | Self-tapping Screw, 5/16-18 x .75 | 55 | 710-0501 | Hex Cap Screw, 1/4-20 x 2.0 |
| 13 | 711-0677 | Ferrule, 5/16-18 | 56 | 710-0514 | Hex Cap Screw, 3/8-16 x 1.0 |
| 14 | 712-0417A | Hex Flange Nut, 5/8-18 | 57 | 710-0599 | Self-tapping Screw, 1/4-20 x .5 |
| 15 | 712-0431 | Flange Lock Nut, 3/8-16 | 58 | 710-0650 | Self-tapping Screw, 15/16-18 x .875 |
| 16 | 712-3004A | Flange Lock Nut, 5/16-18 | 59 | 710-0703 | Hex Screw, 1/4-20 x .75 |
| 17 | 712-3006 | Hex Nut, 1/4-20 | 60 | 710-0805 | Hex Cap Screw, 5/16-18 x 1.5 |
| 18 | 712-3009 | Hex Lock Nut, 5/16-18 | 61 | 711-0993 | Belt Keeper Pin |
| 19 | 712-3027 | Hex Flange Lock Nut, 1/4-20 | 62 | 712-0271 | Hex Sems Nut, 1/4-20 |
| 20 | 714-0104 | Internal Cotter Pin, .072 x 1.12 | 63 | 732-0429A | Extension Spring, .5 x 3.97 |
| 21 | 714-0111 | Cotter Pin, 3/32 x 1.0 | 64 | 732-0594A | Extension Spring, .91 x 7.33 |
| 22 | 717-1553A | Deck Adjustment Gear | 65 | 738-0347 | Shoulder Spacer, .625 x 1.16 |
| 23 | 710-0578 | Screw, 1/4-20 x 1.5 | 66 | 738-0572 | Shoulder Screw, .374 x 1.16 |
| 24 | 726-0233 | Push Nut, .25 x .5 | 67 | 742-0611 | Three-in-one Blade, Star Center, 16.28" |
| 25 | 731-1032B | Side Discharge Chute Assembly | 68 | 742-0612 | Three-in-one Blade, Star Center, 14.88" |
| 26 | 731-2231A | Belt Cover | 69 | 746-1107 | Bracket Cable, 12" |
| 27 | 732-0306 | Compression Spring, .406 x .531 x 1.75 | 70 | 750-0807 | Spacer, .385 x .625 x .70 |
| 28 | 732-0428A | Compression Spring, .50 x 4.35 | 71 | 754-0349 | Deck Belt |
| 29 | 734-0973 | Deck Wheel, 5 x 1.38 | 72 | 756-0627 | Flat Idler Pulley, 3.5 OD |
| 30 | 736-0105 | Bell Washer, .401 x .87 x .063 | 73 | 783-0139 | Idler Bracket |
| 31 | 736-0119 | Lock Washer, 5/16 | 74 | 783-0141 | Center Deck Skirt |
| 32 | 736-0270 | Bell Washer, .265 x .75 x .062 | 75 | 783-0142 | RH Deck Skirt |
| 33 | 736-0275 | Flat Washer, .344 x .688 x .065 | 76 | 783-0747 | LH Belt Cover |
| 34 | 736-0416 | Flat Washer, .320 x 3.0 x .125 | 77 | 731-1636 | Mulch Plug, 46-inch Decks (if so equipped) |
| 35 | 738-0373 | Shoulder Screw, .498 x 1.53 | 78 | 712-0291 | Hex Lock Nut, 1/4-20 (if so equipped) |
| 36 | 742-0616 | Three-in-one Blade, Star Center, 21.23" | 79 | 17116 | Deck Brake Assembly, 46-inch Decks |
| 37 | 746-0970 | Bracket Cable, 5.35" | 80 | 783-0805A | RH Belt Cover |
| 38 | 747-1116 | Deck Release Pin | 81 | 753-0872 | 46-inch Deck Assembly Complete (Manual PTO activated, w/o mulch kit) |
| 39 | 747-1202 | Deck Brake Rod | 82 | 753-0871 | 42-inch Deck Assembly Complete (Manual PTO activated, w/o mulch kit) |
| 40 | 748-0324 | Shoulder Spacer | | | |
| 41 | 783-1026 | RH Belt Guard Bracket | | | |
| 42 | 783-1027 | LH Belt Guard Bracket | | | |
| 43 | 731-1643A | Mulch Plug, 42-inch Decks (if so equipped) | | | |

Models 617, 618 & 619

Briggs & Stratton OHV V-Twin

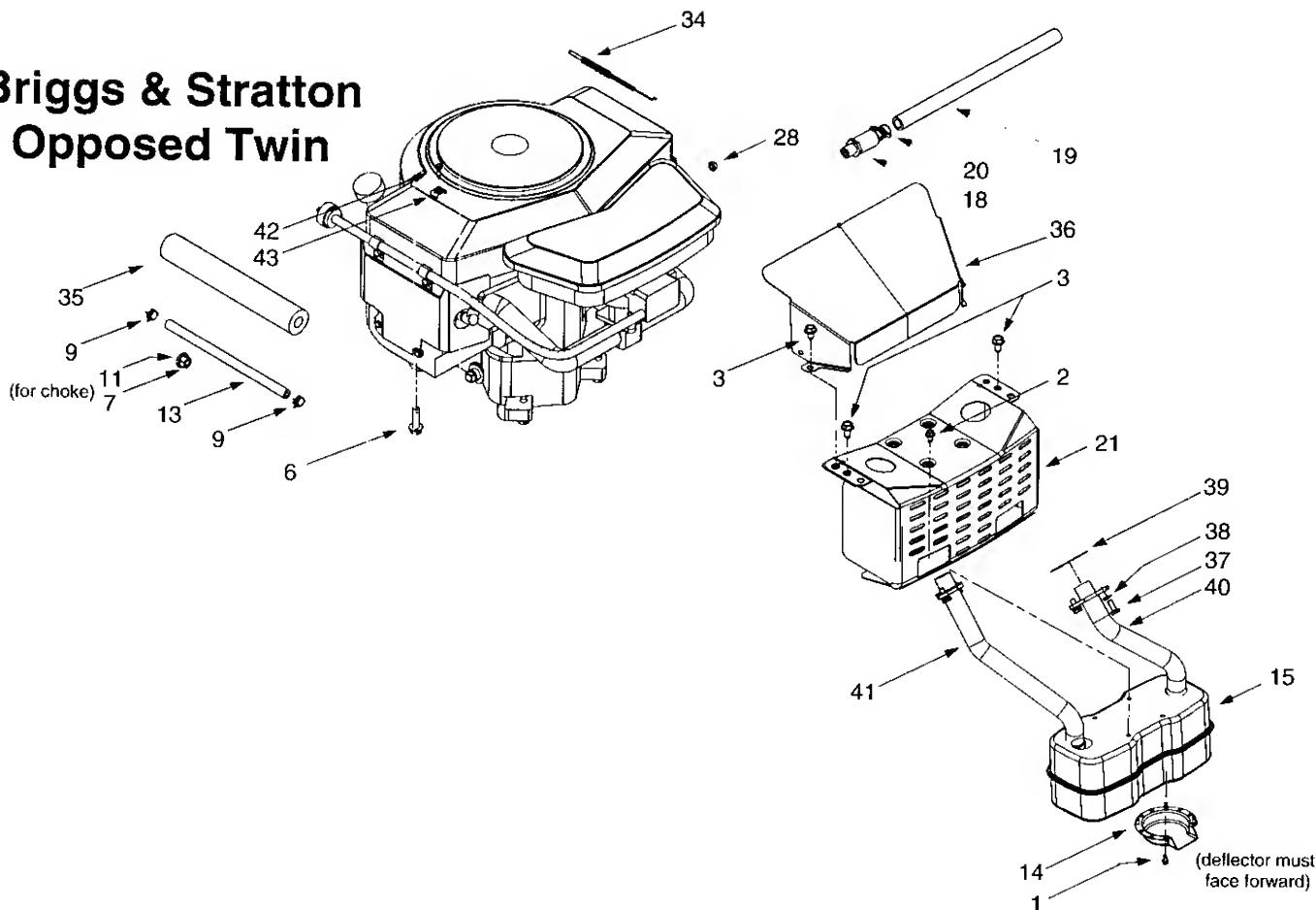


Briggs & Stratton OHV Single



Engine Accessories

Briggs & Stratton Opposed Twin



| REF. NO. | PART NO. | DESCRIPTION | REF. NO. | PART NO. | DESCRIPTION |
|-------------|-------------|------------------------------------|-------------|-------------|---|
| 1 | 710-0148 | Self-tapping Screw, #8-32 x .375 | 23 | 710-3206A | Hex Cap Screw, M8-1.25 x 25 |
| 2 | 710-0599 | Self-tapping Screw, 1/4-20 x .5 | 24 | 712-3086 | Flange Nut, M8-1.25 |
| 3 | 710-0604A | Self-tapping Screw, 5/16-18 x .625 | 25 | 725-0157 | Cable Tie |
| 4 | 710-1237 | Screw, #10-32 x .625 | 26 | 736-0607 | External Lock Washer, 5/16 |
| 5 | 710-1314 | Socket Cap Screw, 5/16-18 x .625 | 27 | 751-0617 | Muffler, Single Inlet |
| 6 | 710-1315 | Self-tapping Screw, 3/8-16 x 1.25 | 28 | 712-0271 | Hex Sems Nut, 1/4-20 (for starter cable) |
| 7 | 712-3017 | Hex Nut, 3/8-16 | 29 | 721-0208 | Exhaust Gasket (OHV Single) |
| 8 | 721-0460 | Exhaust Gasket (OHV V-Twin) | 30 | 732-0966 | Extension Spring, .275 x 1.25 |
| 9 | 726-0205 | Hose Clamp | 31 | 751B213146 | Casing Clamp |
| 10 | 736-0119 | Lock Washer, 5/16 | 32 | 751-0619 | Exhaust Pipe (OHV Single) |
| 11 | 736-0300 | Lock Washer, .406 x .875 x .059 | 33 | 746-1084 | Throttle/Choke Cable (OHV Single) |
| 12 | 751B221535 | Casing Clamp | 34 | 746-1086 | Throttle Cable |
| 13 | 751-0535 | Fuel Line Hose | 35 | 722-0263 | (OHV V-Twin & Opposed Twin) |
| 14 | 751-0564 | Muffler Deflector | 36 | 783-0357A | Foam, .625 x 1.5 x 10 (fits over fuel line) |
| 15 | 751-0616 | Muffler, Twin Inlet | 37 | 710-0751 | Heat Shield (Opposed Twin) |
| 16 | 751-0650 | RH Exhaust Pipe (OHV V-Twin) | 38 | 736-0329 | Hex Cap Screw, 1/4-20 x .620 (Grade 5) |
| 17 | 751-0651 | LH Exhaust Pipe (OHV V-Twin) | 39 | 721-0346 | Lock Washer, 1/4 |
| 18 | 751-3140 | Oil Drain Valve | 40 | 751-0623 | Exhaust Gasket (Opposed Twin) |
| 19 | 751-3141 | Oil Drain Hose | 41 | 751-0624 | LH Exhaust Pipe (Opposed Twin) |
| 20 | 751-3142 | Oil Drain Cap | 42 | 712-0779A | RH Exhaust Pipe (Opposed Twin) |
| 21 | 783-0615 | Muffler Heat Shield | 43 | 726-0272 | Screw, #10-16 x .5 |
| 22 | 783-0625B | Engine Heat Shield | | | Clamp, 9/16 |

MANUFACTURER'S LIMITED WARRANTY

The limited warranty set forth below is given by MTD PRODUCTS INC ("MTD") with respect to new merchandise purchased and used in the United States, its possessions and territories.

MTD warrants this product against defects in material and workmanship for a period of two (2) years commencing on the date of original purchase and will, at its option, repair or replace, free of charge, any part found to be defective in material or workmanship. This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water or damage because of other peril or natural disaster. Damage resulting from the installation or use of any accessory or attachment not approved by MTD Products Inc. for use with the product(s) covered by this manual will void your warranty as to any resulting damages.

Normal wear parts or components thereof are subject to separate terms as follows: All normal wear part or component failures will be covered on the product for a period of 90 days regardless of cause. After 90 days, but within the two year period, normal wear part failures will be covered ONLY IF caused by defects in material or workmanship of OTHER component parts. Normal wear parts and components include, but are not limited to, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, shave plates and tires. Batteries are covered by a 90-day limited replacement warranty.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE THROUGH YOUR LOCAL AUTHORIZED SERVICE DEALER. To locate the dealer in your area, please check for a listing in the Yellow Pages or contact the Customer Service Department of MTD PRODUCTS INC by calling 1-800-800-7310 or writing to P.O. Box 368022, Cleveland, Ohio 44136-9722.

This limited warranty does not provide coverage in the following cases:

- a. The engine or component parts thereof. These items carry a separate manufacturer's warranty. Please refer to the applicable manufacturer's warranty on these items.
- b. Log splitter pumps, valves and cylinders have a separate one year warranty.

- c. Routine maintenance items such as lubricants, filters, blade sharpening and tune-ups, or adjustments such as brake adjustments, clutch adjustments or deck adjustments; and normal deterioration of the exterior finish due to use or exposure.
- d. MTD does not extend any warranty for products sold or exported outside of the United States of America, its possessions and territories, except those sold through MTD's authorized channels of export distribution.

No implied warranty, including any implied warranty of merchantability or fitness for a particular purpose, applies after the applicable period of express written warranty above as to the parts as identified. No other express warranty or guaranty, whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product shall bind MTD. During the period of the Warranty, the exclusive remedy is repair or replacement of the product as set forth above. (Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.)

The provisions as set forth in this Warranty provide the sole and exclusive remedy arising from the sales. MTD shall not be liable for incidental or consequential loss or damages including, without limitation, expenses incurred for substitute or replacement lawn care services, for transportation or for related expenses, or for rental expenses to temporarily replace a warranted product. (Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.)

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. Alteration of the safety features of the product shall void this Warranty. You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the use or misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser, original lessee or the person for whom it was purchased as a gift.

How State Law Relates to this Warranty: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.